

THE
CHICAGO MEDICAL
JOURNAL & EXAMINER.

VOL. XLVII.—SEPTEMBER, 1883.—No. 3.

Original Communications.

ARTICLE I.

ANTISEPTIC REMEDIES IN THE TREATMENT OF DISEASES OF
THE EYE AND EAR. From a Lecture at the Clinic of Rush
Medical College. By DR. E. L. HOLMES.

A candid survey of the experience of a large number of specialists in the application of antiseptic remedies in ophthalmic and aural surgery, leads, I think, to the conclusion that, after all that is possible has been accomplished by pure water, the field is limited in which antiseptics are proven to be of decided benefit.

This field, though limited, is very important, and embraces the treatment of several serious conditions.

The habit of carefully washing the hands, and especially the finger nails, during the hours of practice, and of cleansing all instruments, brushes and sponges in an abundance of pure water immediately before and after use, nearly banishes the danger of septic poisoning.

Those instruments and dressings which have been neglected after operations, and which retain dried pus, blood and other discharges, should remain some time in hot water, and be thoroughly disinfected by means of a quite strong solution of carbolic acid.

Before every operation, however trivial, it is well to cleanse the integument of the lids and adjoining parts with a solution of boric acid or of carbolic acid.

It is safe to keep all sponges and dressings impregnated with a weak solution of one of these acids and closely confined in a tight vessel.

While I must urge upon you the necessity of strict cleanliness in the management of surgical and of accidental wounds of the eye, I must admit, that within two or three years, I have accomplished this simply by the use of water. During more than twenty-four years I had never known a case of erysipelas, or of serious inflammation to follow an operation on the lids, or the operations for strabismus and pterygium, either in hospital or in private practice. And yet at the Eye and Ear Infirmary there had been several epidemics of facial erysipelas.

For the moral effect and for your own satisfaction in case of a possible accident, I advise you to apply, as dressing, compresses, moistened with antiseptic lotions, for all operations and wounds.

There is perhaps more certainty in regard to the benefits derived from the use of antiseptics in at least three forms of disease of the eye — purulent conjunctivitis, especially gonorrhœal — “creeping” ulcer of the cornea and blennorrhœa of the sack and nasal duct. In the first two diseases the eye may be frequently irrigated with the lotion; in the last, the lotion should be injected by means of a suitable syringe.

Some specialists believe that solutions of atropine, homatropine, duboisia, eserine and pilocarpine should be prepared as far as practicable only at the time they are required for use. A minute quantity of boric acid or of carbolic acid tends to prevent the growth of fungi in these solutions, which almost invariably appear without some form of germicide.

It will sometimes be within your power to prevent the spread of contagious diseases of the eye, by warning individuals suffer-

ing with purulent discharges from the eyes or genital organs, against the dangers to themselves and those around them resulting from want of strict cleanliness of person and clothing.

Special warning seems necessary in cases of vaginitis in young (scrofulous) children. Cases are not rare in which the disease has been overlooked or neglected, and the poison unwittingly conveyed by the children to their eyes.

As accoucheurs you may prevent serious disease of the eye in new-born infants by thoroughly irrigating with antiseptic solutions the vagina of every woman suffering from leucorrhœa during the last hour of parturition.

In families, schools, and public institutions, where many persons are collected, all patients with purulent discharges from the eyes should be carefully isolated. The lids of such patients must be kept clean by the frequent removal of pus by means of bits of linen or absorbent cotton. Pillow cases, towels and handkerchiefs soiled with pus should be placed at once in water, thus preventing contamination of the air from dried pus cells.

The most convenient solutions for the eye are perhaps the following: Carbolic acid, one grain to the ounce of water; boric acid, eight grains to the ounce; salicylic acid, three grains, with four grains of borax to the ounce; hyd. Bichlor., one grain to eight or ten ounces of water. It is doubtful if other agents possess special advantages over those above mentioned.

I need not dwell on the application of this class of remedies in diseases of the ear. Their special use is limited almost entirely to purulent affections. The strictest cleanliness of the external meatus, as attained by the frequent and prolonged injections of warm water, must be enjoined in obstinate cases; the meatus, then carefully dried by means of cotton, is to be partially filled with powdered boric acid, or the usual astringents. It is seldom that patients will not easily tolerate injections of warm water. Exceptionally the cotton and cotton holder mus. be employed to remove pus from the ear.

Following the injection, in place of the boric acid may be used, in certain cases, a solution of carbolic acid, of permanganate of potash, or of thymol, alternated with astringent solutions.

The utmost care is demanded in cleansing instruments em-

ployed for the ear, as for the eye, immediately after use. Pure water, we believe, is usually sufficient for this purpose. Eustachian catheters and other instruments introduced into the nostrils and throat are liable to come in contact with poisonous discharges. For this reason they should be placed for a time in quite a strong solution of carbolic acid. Except when instruments have been neglected after use, it seems to be excess of caution to boil them in hot water.

I do not wish to consider at this time the manner in which antiseptic remedies are beneficial, nor to discuss the theories whether organisms are the cause or the result of diseases of the eye and ear.

ARTICLE II.

A SERIES OF TRIPLETS. By HENRY OGDEN, M.D. Read before the Chicago Medical Society, June 18, 1883.

A TRIO OF TRIPLETS.—The occurrence of triplets being rare, and three cases occurring in this city recently within the space of seven weeks, I concluded it might be interesting to the medical profession to know something more in detail in regard to these cases.

By request of the editors of the JOURNAL AND EXAMINER, I have gathered up such facts as were attainable relating to them.

I first condense from Dr. Spiegelberg, the German author, a few general points in relation to membranes, ova., etc., in multiple births, after which I shall present the cases of triplets occurring here.

As high a number as five children at a birth have been known to occur, a preparation of which was seen by Dr. Spiegelberg.

I have not been able to find any authentic record of a higher number.

Some of the old French and German authors speak of some remarkable cases, but I believe none of them claim they actually saw these cases, but say "it was thus written."

The frequency of multiple births varies with the year and country.

Twins are said to occur once in eighty times, while triplets occur only once in 6,000 or 7,000 times, the number varying a little with different authors from the above.

Generally twins are of different sex, next in frequency are two boys, and least in frequency are two girls.

There are either two corpora lutea or one double one. Sometimes two come from one ovary and sometimes one from each ovary. This has been known only where post-mortems were had. The decidua is single except in cases of double uteri. The membranes may be double or single, as also the placenta. If the chorion is double there has been more than one egg.

Two separate placentæ may have grown together. If the eggs are far apart a decidua may separate them.

The placental circulations are separate if there are two chorions, or at least the anastomosis is very limited. If there is one chorion the fruit has come from one ovum. If there are three vesicles in one ovum and three placentæ, the placentæ are melted together and there is no trace of a septum between them. This was the condition in Dr. Bartlett's case.

In cases where there is only one ovum, a large anastomosis is necessary between the foetal blood vessels, even between a vein and an artery. Twins in a common ovum are uniformly of the same sex, that is, they are alike, while children from different ova have such general resemblance only as offspring from the same parents commonly present.

In twins one single chorion occurs one time in eight, while the amnion is single only once in 132 times. In triplets and in other multiple cases, the same rule holds as to the placentæ and membranes, except, however, there are some complicated relations.

Commonly in triplets there exists one ovum alongside of a double one, yet there has been observed in triplets one chorion only, as also in cases of quadruplets. The relative frequency of a common amnion seems to increase with the number of children at a birth.

Generally in size and weight twins are below the average. But in twins at full term the aggregate weight is greater than in case of one child.

More commonly than in single labor is the fœtus discharged at the 39th to the 40th week, on account of the tension of the uterus. The mother's organs not being large enough for more than one, generally, besides the tension in the uterus, may be supposed to mechanically interfere with their development. Sometimes they are not developed alike, one small; one large. The latter may be supposed to have had better surroundings in the way of location for getting a blood supply from the uterus. This is often observed in double uteri cases. The size of the placenta, the length and thickness of the cord, corresponds to the size of the child.

The largest child is not always born first, as in Dr. Bartlett's case of triplets, the medium sized one first, the smallest next, and the largest child was born last. But in the other two cases now reported, the largest was first, the medium sized one next, and the smallest last.

CASE BY MIDWIFE.—MRS. M. LONDT.

The first case of triplets we note here occurred at No. 96 Fullerton avenue. Parents are German; were married in Germany, and one child born there. Moved to this city eleven years ago.

The father, Mr. Anton Arendt, is 40 years of age, is of medium height, but good weight. The mother, Julia Arendt, is 32 years of age, good size and weight, very fair complexion, and light blue eyes. She has given birth to nine children, three boys and six girls, including the triplets. At 3 o'clock, Sunday morning, February 11, 1883, the mother was awakened by some slight labor pains, but they were not very severe until after 6 o'clock, when the midwife was sent for. At about half past six o'clock her pains began to increase so that she was compelled to take to the bed.

The midwife did not arrive until 7:20 A. M., and at 7:30 A. M. the first baby was born. At 7:45 the second child came, and at 8 o'clock the third baby was born, there being only 15 minutes between the births of the first and second and second and third. All girls and living. At 8:10, or ten minutes after the last child was born, the placenta came away, being very

large and apparently in one common mass, showing the three separate cells very distinctly, and the cords varying in length and size according to the size of the babies.

The first was a vertex presentation, while the last two were foot presentations. In this instance the largest child was born first, the medium sized one next, and the smallest one last.

The weights were $6\frac{1}{2}$ pounds for the first, $5\frac{1}{2}$ pounds for the second, and $4\frac{1}{2}$ pounds for the third, a total of $16\frac{1}{2}$ pounds.

The babies are all in good health, although the youngest has been slightly ill at times. The mother nurses them, but as the amount of her milk is inadequate to the demands, the bottle is used to make up the supply.

There was a great amount of hæmorrhage, and the patient was in bed for about seven weeks, when she was able to be about the house.

She now complains of severe pains in joints, more in the right knee and foot. During term of pregnancy her legs became swollen occasionally, so that she was unable to stand on her feet for a part of a day at a time.

All of her previous labors were very much longer and more tedious than at this time. Mother and children were doing well at last accounts.*

CASE OF DR. H. VANBUREN, 15 N. MAY ST.

At a little after midnight on the morning of March 30, 1883, Dr. V. was called to the house of Mr. E. Garrison, 341 W. Randolph St., and found his wife, Alice Garrison, in labor pains, but not at all severe. She lingered along, with some inertia of the uterus, till 5:30 A. M., when she gave birth to the first boy. This was a breech presentation.

At 6 o'clock, the second boy was taken with the forceps, as there seemed to be a detachment of the placenta, cutting off the blood supply to the child. This was a vertex presentation. At 7 o'clock A.M., the third boy was still-born, and by appearances had been dead for several hours. This was a foot presentation.

These children were born within an hour and a half. In about

* The last born child died in June from inanition, having been weak from her birth.

20 minutes the placenta came away. There were separate and distinct cells and cords, and one common placenta. The cords were shorter than with single cases.

The first child weighed $5\frac{1}{2}$ lbs., the second 5 lbs., and the third $4\frac{1}{2}$ lbs., making an aggregate of 15 lbs.

The placenta was but little larger than in average single births.

There was only the usual amount of hæmorrhage, and the labor, on the whole, was not more severe, or the pains to exceed the average case of an easy single birth.

Patient had given birth to one child before, and she was now at full term. Patient's mother had twins.

Parents are American.

The father of these children is 35 years of age; tall and fleshy, weighing about 200 lbs. The mother is 25 years of age; she is about medium size and weight.

She was very well all through term and is getting on well now, and nurses the two surviving boys.*

CASE OF DR. JOHN BARTLETT, 450 N. CLARK ST.—TRIPLETS.
FEMALE.

Parents are Swedish, residing at 1675 Gehrke avenue.

The father, Albin Nelson, 28 years of age, is tall and good size. The mother, Augusta Nelson, 24 years of age, weighs 135 lbs.; is blonde, of good stature and form. Was delivered of her first child by a midwife, January 26, 1881, twenty-six months prior to the birth of triplets.

Some weeks afterward, Dr. Bartlett was called, because of her slow getting up; found cellulitis existing, and also a want of normal involution.

These conditions yielded readily to the usual means, and on March 3, 1882, he was called upon to attend her in childbirth. The head was presenting favorably, but the labor was tedious from uterine inertia, so that it finally became necessary to deliver with the forceps. Her recovery was satisfactory.

On March 27, 1883, Dr. B. was again called to her, and she

* As noted above, the last born baby was still-born. The first born died July 9th. The second born died July 13th. Both were sick about one week with indigestion, and died of cholera infantum. They were fed by the bottle after May 1st, but did not do well.

was again in labor, and, as she thought, several weeks before her time.

Two weeks previously, she had greatly fatigued herself in walking, and a few hours afterward she was seized with violent neuralgic pains in the uterus, so that a miscarriage was feared. The patient called attention to her unusual size, and expressed jocously a conviction that she would have twins; the uterus was very large. No indications of a plural pregnancy were detected upon palpation. The labor progressed normally, the pains being stronger and more efficient, and the os dilating more speedily than in the former labor. At 10 o'clock A. M., a child below the normal in size was born, the presentation being cephalic.

Struck by the relative smallness of the child and the yet large size of the uterus, apparent at a glance, the cord was tied as promptly as was proper, and attention given to the mother.

Pains were recurring, and an additional sac of membranes was gathering in the os. Through these it could be determined that neither extremity of the foetal ovoid was presenting, and accordingly he ruptured the membranes at once, and sought to discover the position of the child. The right side of the abdomen presenting, the feet were at once sought, and the child turned and promptly delivered. The second child was considerably smaller than the first. This being removed, the womb was noted to be larger than after complete delivery, and a third sac was found descending into the os. Discovering here, likewise, through the membranes, that a cross-birth existed, he ruptured the membranes, and found a third child presenting, with right humerus and thorax toward the os. The child was promptly turned. It descended readily till the head engaged in the brim, gentle traction having been made upon it. Finding both arms extended alongside of the head, the ordinary rules were disregarded, and the head pulled through with the arms as mentioned. This traction was such as to approach force, but not violence.

The first and second child breathed promptly; this last was slow to respire, so that the ordinary restorative measures, including artificial respiration, were used, but in a few minutes breathing was established and the child removed. This completed the birth of three girls.

Notwithstanding the rather speedy emptying of the uterus, there being only five minutes intervals between the birth of the children, the womb responded quickly and well to the manipulation of the hand through the abdominal walls, and promptly contracted on the placenta.

It was noticed that it was in this stage unusually large. Gentle pressure and friction was maintained for some time. There was no hæmorrhage, nor could the placenta be felt by the finger per vaginam. After the lapse of fifteen minutes, a gush of blood occurred, apparently about 7 or 8 ounces. No sooner had this been removed than a second gush followed, as copious and sudden as the first. It was evident that the placenta was partly detached and a violent post partum hæmorrhage was probable, if energetic measures were not at once adopted. The hand was passed into the uterus and insinuated between the membranes and its walls. The edge of the very large placenta was reached at a point not separated from the uterus. Detachment was here begun and carefully continued over the whole attached surface. Contraction ensued and no more than ordinary hæmorrhage followed.

This placenta was single, weighing 2 pounds 6 ounces and measuring $9\frac{1}{4}$ by $9\frac{1}{2}$ inches across. The largest cord measured $18\frac{1}{2}$ inches in length, the medium 17 inches, the smallest $14\frac{1}{2}$ inches. The amnions were separate and the cells were proportionate in size to the cords and weight of the children, which were as follows: 6 pounds one ounce for the first, 4 pounds one ounce for the second, and 6 pounds nine ounces for the last born, aggregating 16 pounds 11 ounces. The patient did perfectly well till the 10th day, when over-exertion in the care of the children brought on a threatening of cellulitis, which, however, was apparently aborted within a few days. But from exposure and imprudence in exercise, a decided attack of cellulitis occurred on the 24th day, which confined her to the bed for three weeks.

The inflammatory exudation, as large as a child's head, was confined to a part of the true and false pelvis on a level with, to the left of, and behind the uterus. Recovery was finally complete. In connection with this attack of cellulitis it is well to state some additional facts. It will be noticed that in the de-

livery of the third child, Dr. B. followed the precepts of Deventer, and withdrew the head with the arms extended alongside of it. In so doing, he was careful to place the diameter of the child presented by the head plus the thickness of the arms in a long diameter of the superior strait, the left oblique. It has been stated that in the extracting this head a degree of traction was used more than is commonly found necessary in delivering the after coming head in multiparæ.

It was noted that more than usual pain was complained of under these manipulations; possibly the cellulitis which followed may have been in part due to bruising of her tissues by the passage of the enlarged diameter presented by the head and extended arms. As there are those who may question the practice of leaving the arms extended in this case, it may be well here to state that it was not with the object of experiment that Deventer's plan was adopted in this instance, but in part from the urgency of the case. The arms were above the head at the superior strait; pulsation had ceased in the cord; promptness in delivery was demanded, and in this extremity, Dr. B. recalled and relied upon the precepts of Deventer. As all present may not be familiar with the instructions of the old authority referred to, it may be well to state them in brief.

In his first edition, 1724, he says :

"Whereas all the authors that I know teach to the contrary, I positively advise that (in delivering by turning) the arms be left (extended) about the head, to be excluded along with it. In my practice, everything has succeeded very well by this method, not so much as one head having stuck in the mouth of the womb.

"If the head passes with difficulty, which seldom happens, you may draw down one hand or the other, but both hands are never to be drawn down; that would do more mischief than good.

"In turning in the early stage of labor, neither the mother nor the child are exposed to the danger of death.

"The whole matter (success in turning) depends upon two things:

"First, the proper introduction of the hand. Second, the greatest care should be taken that the head and arms pass together."

These citations from Deventer formed the basis of remarks made by Dr. Bartlett before the Gynæcological Society, in December last, in a paper entitled "A Lesson from Deventer."

In the case before us, the diameter formed by the head and arms of the child pressed against the temples, measured $4\frac{1}{4}$ inches, exactly the same as the transverse diameter of the inferior strait, a relation demanding, even in this undersized child, a compression of soft parts. In conclusion, I will quote some figures from Scanzoni, the well-known German author, relating to the frequency of multiple births.

From a table taken from the registration of births in Prussia, between the years 1826 and 1849, a period of 23 years, it would appear that there were 13,360,575 births. Of these, there were 149,964 cases of twins, 1,689 cases of triplets, and 36 cases of quadruplets. In other words, there were twins once in 89 cases, triplets once in 7,910 cases, quadruplets once in 371,126 cases, and no case of a higher number appeared upon the record.

AUGUST 1, 1883.

After reading the "Trio of Triplets" paper to the Chicago Medical Society, other cases of triplets occurred in this city, and as there were some points of interest in them, I subjoin a brief description of these cases, also, some points in a case of triplets occurring at Mendota, Ills., two years ago.

CASE ATTENDED BY DR. J. TASCHER, corner Ashland and Chicago Avenues.

Parents German, residence, 82 Emma street; married 13 years. Father August Vogt, 41 years of age, a little under the medium size, and by occupation a blacksmith. Mother Frega Vogt, 32 years of age; good size and stature, blonde, with blue eyes. She has given birth to nine children, two boys and seven girls, including the triplets. No history of multiple births in the family.

On the morning of June 20, at about 6 o'clock, pains came on and Dr. T. was called to her. On examination the membranes were found to be ruptured, shoulder presentation, with one hand in vagina. At the side of the shoulder was felt what seemed to

be one or more hands covered by an unruptured bag of waters. This in connection with the excessively large uterus, led to the conclusion that twins were forthcoming. It was thought best to administer chloroform, but an examination of the heart revealed a mitral deficiency, so the administration of chloroform was dispensed with for evident reasons. Podalic version was performed with but little pain to the patient. Almost immediately after the feet were brought down No. one was born.

On examination found a second bag of waters and a hand presenting, ruptured the membranes and turned No. two without difficulty, after which it was born without further assistance.

The uterus being still quite large and pains energetic, examination was again made, and this time a vertex presentation was found, with membranes intact. These were ruptured and No. three was born without further delay.

After this a drachm of fld. ext. ergot was administered and used Crede's method to insure uterine contraction. In a short time three separate placentæ were expelled. But little hæmorrhage followed, barely enough to soil the clothing. Labor was completed in about an hour after the first child was turned. The three female children were born before 8 o'clock A. M.

The babies weighed respectively at birth 5 lbs, 5½ lbs, and 5 lbs, aggregating 15½ lbs.

Mother kept her bed nine days, when she was about the house. Says she was about two weeks short of full term. Had swelled feet two weeks before the babies were born, but otherwise was quite well, thinks this very much the easiest labor she ever had.

CASE BY DR. P. J. ROWAN, 138 S. Desplaines street.

Parents are Irish-American born.

Residence, 608 Dickson street.

Father, James Quigley, is 30 years of age, medium size, good stature, weighs about 180 pounds.

Mother, Kate Quigley, is 27 years of age, rather small in size and stature, not weighing over 100 pounds; black eyes and dark complexion.

Has given birth to three children before the triplets; one boy and two girls, and now three girls.

Pains began at 1 o'clock P. M., July 8, 1883, and Dr. R. was sent for. Upon arrival it was found that the pains were light, but had been quite effectual, as the os was well dilated. The membrane was ruptured, and at 5 P. M., the first female child was born without difficulty. Another membrane engaged in the os was ruptured, and at 5:15 P. M. the second girl was born as easily as the first. These two were foot presentation. At 5:30 the third girl baby was born, this presentations being cephalic. A drachm of ext. ergot fl. was administered, and in a few minutes the placenta came. It was in two parts; one was by itself, except being connected to the other mass by a small, thin sheet of membrane, which easily gave way and was not vascular. The other two were in one mass, with fissures or notches on each side, midway. But there is perfect anastomosis, as the two are melted together.

The chorions and amnions were separated, and each sac seemed to contain as much liquor amnii as is found in ordinary single cases, thus giving the mother a remarkably disproportionate size. The uterus contracted well, so that there was only slight hæmorrhage.

At the birth of her first child, some years ago, there was a laceration of the perineum reaching quite to the sphincter ani muscles, which still exists. This may account for the easy expulsion at this time, while forceps have been used in the previous births. Patient has made a good recovery, being in bed about ten days. The first baby weighed $4\frac{1}{2}$ pounds, the second $3\frac{3}{4}$ pounds, the third $3\frac{1}{2}$ pounds, a total of $11\frac{1}{2}$ pounds. The third born child died three days after birth, the second five days after birth, both from inanition. The first born lived twenty-three days and died of convulsions.

CASE OF DR. J. W. EDWARDS, MENDOTA, ILL.

Parents Irish.

Father, Mr. C., is Irish-American born; 36 years of age; 5 feet 10 inches in height, and weighs 180 pounds.

Mother, Mary C.; native of Ireland; 35 years of age; medium stature, weighs 150 pounds, is mother of eleven children, having

had four boys and four girls before the triplet girls, this being her ninth labor.

At 2 o'clock A. M., June 3, 1881, patient was awakened by pains which increased in frequency and force, and at 3 o'clock Dr. E. was called.

The membranes were found to be ruptured, and the child's head engaged at the superior strait. This was a vertex presentation.

A few severe pains completed the delivery of a female child at 3:30 A. M.

Finding the uterus still larger than at full term, and evidence by motion of the presence of a second child, using gentle circular friction, pains came on and membranes engaged in the os. They were ruptured and vertex presentation determined. After a few pains a second girl was delivered at 4:20 A. M.

It was found that the womb was still as large as in a case at full term, and a third examination detected another set of membranes presenting. These were ruptured as before, and after three pains the third female child was delivered at 5:20 A. M. This was a vertex presentation.

The uterus contracted down well upon the expulsion of the third child, and in about fifteen minutes placenta No. one was thrown into the vagina and removed. Immediately following was Nos. two and three, partially attached to each other by membranes, all presenting a separate cell and cord, each placenta was a little more than half the usual size of the average single case.

The weights of children were for No. one 6 lbs, No. two $7\frac{1}{2}$ lbs, and No. three 7 lbs, aggregating $20\frac{1}{2}$ lbs.

There was only the usual hæmorrhage, and the labor shorter than any of the eight preceding, as the children were always large, averaging ten pounds, and the first and second stages of labor were never less than the whole time required in the delivery of these three children. Patient was, however, slower getting up at this time, but recovery was complete. No history of twins or triplets in the family. These triplets are now two years old and well.

Condensing from these six cases, we find the nationality to be two German, one Swede, two Irish and one American.

Five of these cases were females, while one case was males. There is no history of multiple births in families, except one patient's mother had twins.

In each case the labor was much easier and shorter than any preceding, and in no case was the hæmorrhage up to the usual amount. In three cases the placenta was common, with, however, separate cells, and in three cases the placentæ were separate.

In the six cases, there were nine foot presentations, eight vortex and one breech presentation.

Each patient has made a complete recovery.

Dr. L. H. Montgomery has reported to me a case of triplets, of German parents, in the summer of 1869, near Shullsbury, Wisconsin.

The case was a farmer's wife, some five miles from the town, and Dr. M. saw the case with his preceptor, and they were able to report everything favorable, and that none of them had gotten away, etc. When the second child was born, the mother fainted, and remained unconscious during the birth of the third child (only a short interval, however), and she was not aware of the birth of a third child until told of it, when she exclaimed in her teutonic dialect: "Das ist genug." The children possess unusual intelligence, and are foremost in their studies. The surnames of the two boys are John William and William John, the girl, Sarah. There are such strong resemblances in the boys' facial features that their most intimate acquaintances have to turn them around to recognize them, which is often done by school mates. They are all quite well, and, as above stated, are unusually bright.

243 N. CLARK ST.

DRS. DE LASKIE MILLER and Wm. H. Bradley, of Chicago, are in Europe. Will return in September.

DR. R. L. LEONARD, of Chicago, is visiting on the Pacific Slope.

ARTICLE III.

ANIMAL HEAT AND ITS MECHANICAL EQUIVALENT. (Read before the Chicago Medical Society, July 16, 1883, by Dr. H. D. VALIN.)

Origin of Animal Temperature.—Although plants and cold-blooded animals are supposed to be of the temperature of the media in which they live, this is an illogical inference, for the elements of which living matter is composed have each their specific heat, and the sum of their specific heats should be the heat of the organism itself, which would thereby possess a temperature of its own even when the functions of life were suspended.

We know that while air, and even water, absorb but a small portion of the heat-waves which strike them, organic bodies, as well as the various minerals, absorb a much greater proportion. From the experiments of Leslie, and the later experiments of John Tyndall, it seems established that the heavier elements absorb more heat than the lighter ones, and this seems to account satisfactorily for the elevation of temperature of organic substances above the temperature of air and water, and may be looked upon as the primitive source of the respective temperatures of animated beings, and is probably the only source of heat in the lower organisms. Some experiments made by Tyndall, at Hind Head, in March of the present year, illustrate some of the facts of heat absorption and heat radiation thus:

At 6:50 A. M., the temperature of the surface of the earth was 25° F., that of the air four feet above was 6° higher at sunrise. At 9:30 A. M., the temperature of both was 30°. At 2:30 P. M., the temperature of the earth was 58°, and that of the air was 48°. So that while both were equally exposed to solar heat, the earth absorbed several degrees more of it than the air did, and this is probably in direct proportion to the greater specific gravity of earth compared with air.

The ordinary source of heat is chemical affinity—generally the process of oxidation, and there is no doubt that solar heat has a similar origin. But chemical affinity taking place within the organism, produces the same amount of heat that it would in purely inorganic compounds of the same elements when they

mix chemically. Heaps of barley in the act of sporulating generate several degrees of heat, because in germination a chemical process of oxidation of the starch of the seed takes place, thus :

$(C_{12}H_{20}O_{10})_{24} + O =_5 (C_{12}H_{24}O_{10}) +_{12} CO_2$ (Bessey), and glucose is formed, which is assimilated by the developing embryo.

A similar process accounts for the unusual rise of temperature observed in some flowers during fertilization. According to Sach, a thermometer placed in the spathes of some of the Arales, the Calla lily (*Richardia Africana*), and the wild turnip (*Arisaema*), indicates a rise of from five to ten degrees C. above the temperature of the atmosphere, while fecundation is taking place. It is well known that in the Angiosperms the pollen grains germinate on the moist surface of the stigma, so that germination and fertilization are very nearly the same process.

"Dr. Carpenter suggests the probability of extraneous forces, as heat, light and chemical affinity, continuously operating upon the material germ, so that all that is required in this is a structure capable of receiving, directing and converting these forces into those which tend to the assimilation of extraneous matter and the definite development of the particular structure." (Grove). The action of the germ is thus reduced to one of catalysis.

But as the individual heat of plants is mostly a result of oxidation, so in the animal economy, all other sources of heat but oxidation may safely be laid aside as of no appreciable causal relation to activity of any kind.

TEMPERATURE OF COLD AND WARM-BLOODED ANIMALS.—In the cold-blooded animals the temperature of the body is always slightly higher than that of the water in which they live, and according to Milne-Edwards, the temperature of bonitos is ten degrees C. above that of water; *Palamys sarda* has a temperature of 5°, and the proteus of the Adelsbergerh grotto has one of 5.6°. Some species of python, while depositing eggs, have a temperature of 6°. Insects at work, as bees in the hive, also give rise to a considerable elevation of temperature.

The temperature of the following warm-blooded animals is in

Man,	-	-	-	36-38° C.	98-99° F.
Dog,	-	-	-	39° "	102° "
Sheep,	-	-	-	40° "	104° "
Birds,	-	-	-	42° "	107.6° "

Hibernating animals generally present a temperature almost identical with that of the atmosphere, thus becoming for the time cold-blooded (Semper). A fall of temperature arrests vital activity, as it does chemical actions, causing in organisms sleep, and death even, if carried to a certain point, which varies with the species and also with the latitude, but within comparatively short ranges. A rise of temperature produces nearly similar effects on animals, and there are summer sleepers in the tropics as there are winter sleepers north, among a number of species, as observed by Darwin. Semper, who is authority for the foregoing statements, and has investigated the subject of animal heat to quite an extent in "Animal Life," expressly states that "the general identity of the influence exerted by a reduction of temperature, both in high latitudes and equatorial regions, is not to be disputed. This consists in the fact that every reduction of temperature below the optimum, whether that optimum be high or low, so diminishes the vital energy of many, though not of all animals, that they gradually fall asleep, and remain in a condition resembling sleep as long as the low temperature, which induces that condition, lasts."

But it is a necessary sequence of the law of correlation that, within certain limits, solar heat may be transformed within the organism into vital energies, as it is into chemical affinity with so many inorganic substances.

Nature of Heat.—Says Grove, in "Correlation of Physical Forces," "matter has pertaining to it a molecular repulsive power, power of dilatation, which is communicable by continuity or proximity. Heat thus viewed is motion, and this molecular motion we may readily change into the motion of masses, or motion in its most ordinary and palpable form."

Whenever heat is applied to the elements they dilate and expand from the solid to the liquid, and from this to the gaseous state, if the heat is sufficiently great; but no matter how little heat is applied, a certain expansion will be the result. This ex-

pansion or motion often results in the decomposition of the body acted on, and Grove says: "There seems some probability of bodies now supposed to be elementary being decomposed, or resolved into further elements by the application of heat of sufficient intensity."

But, solar heat and light, stored in the cellulose, starch, sugars, and albuminous compounds of plants, become transformed within the plant into vital action subsequently; and as this action or motion serves to transport the seeds to a distance, or serves the purpose of reproduction, it favors the vitality of the organism and is not a dissipation of energy. Whenever the plant furnishes animals with food, the fertilization of the former, its dissemination and cultivation are often thereby insured, and thus has an unconscious partnership of plants and animals been formed by the process of natural selection. But in either case heat and light become transformed into vital energy; and accordingly, heat, as such, is perhaps the most important factor of life, but it is stored in plants (starch) and in animals (adipose tissue), not as heat but as chemical affinity, in the same manner that electricity is stored in the form of oxidation in the storage battery.

Further considerations regarding the nature of heat suggest that heat is that amount of motion which is liberated by a mass whenever its molecules vibrate in a shorter path or with less rapidity than in a previous time—heat would thus be part of the primordial motion with which matter is endowed and whose quantity in the universe remains the same for ever.

Mechanical Equivalent of Heat.—The different modes of force being all interchangeable, a definite amount of one produces a definite quantity of another, and these quantities are all constant, for force is indestructible.

Accordingly, the amount of work which will result from the combustion of a given quantity of coal in the furnace of a steam engine can easily be determined, and on the same principle the amount of work which will result from the combustion of a pound of food in the animal economy can be ascertained with small chances of error.

The mechanical equivalent of heat, as first ascertained by Dr. J. R. Mayer, is that the amount of heat necessary to raise the

temperature of a given weight of water one degree C. will mechanically raise the same weight to the height of 367 metres in four seconds—or a kilogramme of water which has fallen 367 metres and whose fall is arrested when its velocity was 85.83 metres in one second, will be raised one degree C. in temperature. Therefore, according to Mayer, a caloric is 92 metres-kilogrammes a second. But these numbers are not quite accurate.

It was ascertained by Joule that the quantity of heat necessary to raise one pound of water one degree F. was equivalent in mechanical work to 772 footpounds. But as the time is not specified, in works in which the above has been copied, this unit is about useless. Although no notice of the time need be taken in measuring units of heat, in units of work, time is of the greatest importance.

Thus, a *horse-power* is reckoned as a pound raised 550 feet a second, or 33,000 feet a minute. In Ganot's Physics (16th French edition), a horse-power is stated as 75 kilogrammes raised one metre in a second. But the above, which is the American standard, translated into metric figures would approximate 85 kilogrammes metres, a discrepancy which is only equalled by the French caloric of 425 kilogramme metres compared either with Joule or Mayer's unit.

"It has been established by numerous experiments that the combustion of one kilogramme (about two pounds) of dry charcoal in oxygen, so as to form carbonic acid (CO_2), yields 7,200 units of heat. Superior coal yields 6,000; perfectly dry wood, from 3,300 to 3,900; sulphur, 2,700; and hydrogen, 34,600 units of heat."—(Mayer).

It is well to state here that whenever combustion takes place it is in the air, unless otherwise specified, and the heat is always the result of chemical action—oxidation. The following have been ascertained by Dulong: One gramme of olefiant gas raises 12,000 grammes of water one degree C. by its combustion. Alcohol raises 6,900 gr. degrees; olive oil, 9,862. And it is probable that a part of the alcohol taken into the human organism becomes oxidized, and produces heat and activity to a marked degree.

The following is a table of the heat units generated by the

combustion of a gramme of different substances (Silbermann and Fabre), compared with other data :

	H. units.	Formula	At. wgt.	Spec. h.
Oxygen .....	.....	O	16	0.2175
Chlorine.....	.....	Cl	35.5	0.1209
Hydrogen .....	.....	H	1	2.4
Hydrogen with chlorine.....	23.783	H Cl	18	.....
Oxygen with hydrogen.....	33.462	H ₂ O	6	1.00
“ “ oil of turpentine	10.852	C ₁₀ H ₁₆	5.2	0.259
“ “ ether	9.027	C ₄ H ₁₀ O	49	0.479
“ “ charcoal.....	8.080	C	12	0.241
“ “ alcohol.....	7.184	C ₂ H ₆ O	5	0.453
“ “ carbon oxide...	2.403	CO	14	0.24
“ “ sulphur.....	2.262	S	32	0.2025

The atomic weight of a compound is calculated by multiplying the atomic weight of each element by the number of atoms, adding the results, and dividing by the number of atoms ; and a glance at this table will show that the best combustibles are of low atomic weight—that the degree of heat produced in combustion is in proportion direct to the specific heat of the substance used, and hence in inverse ratio to its atomic weight ; so that we should have in the atomic weight of any substance an index of the amount of work which a pound of it could produce when consumed in the animal economy, or in the furnace of a steam-engine.

The degree of temperature at which a substance is oxidized is correlated with the time of combustion, and the result is constant ; so that a cord of wood rotting in the damp produces the same quantity of heat that it would in burning. And the oxidation of a pound of oil in the human body produces the same amount of heat that it would burned in a lamp.

Food Energy.—“Broadly speaking, the animal body is a machine for converting potential into actual energy. The potential energy is supplied by food ; this the metabolism of the body converts into the actual energy of heat and mechanical labor.”—(Foster.) This author in his “Physiology” gives the following data on the authority of Frankland :

The direct oxidation of the following, dried at 100 C., gives rise to—

	GRAM.-DEG.	MET.-KILO.
1 gram. Beef fat.....	9,069	3,841
1 " Butter.....	7,264	3,077
1 " Arrowroot.....	3,912	1,657
1 " Beef-muscle.....	5,103	2,161
1 " Urea	2,206	934

Supposing that all the nitrogen of proteid food goes out as urea, 1 gram. of dry proteid, such as dried beef-muscle, would give rise to about about $\frac{1}{3}$ gram. of urea, and would therefore give as the available energy of proteid, 4,368 grammes of water raised 1 degree C., or 1,850 metre-kilogrammes. In a normal diet would be found:

	GRAM.-DEG.	MET.-KILO.
100 gram. proteid, -	436,800	185,000
100 " fat, - -	906,900	384,100
240 " starch, -	938,880	397,680
<hr/> 440	<hr/> 2,281,580	<hr/> 966,780

In round numbers, the food taken daily contains one million metre-kilogrammes of potential energy, between one-fifth and one-sixth of which is expended as mechanical labor (Foster).

Dalton differs somewhat from the precedent, and states the daily quantity of food of an optimum diet for a man at 130 grammes of proteid, 300 of starch, and 100 of fat; and the following table shows the relative increase of nitrogenous and non-nitrogenous matter of the food under different conditions:

	NITROGEN.	NON-NITROG.
Bare subsistence diet, -	100	100
Full diet, - -	180	147
Diet of active laborer, -	232	155
Diet of hard-worked laborer,	242	169

Taking the average composition of albuminous matter, fat, and carbo-hydrates, we find that a man under ordinary full diet takes into his system daily the constituents of the food, in round numbers as follows:

	GRM.	C.	H.	O.	N.	S.
Albuminous matter	130	70	10	29	20	1
Starch	300	134	18	148		
Fat.....	100	76	12	12		
	530	280	40	189	20	1

When the carbo-hydrates are not burned in the economy, they accumulate in the adipose tissue for future use. Here a consideration naturally presents itself. The carrying of a coal bin on the human engine is useful only in as much as the carbon is used and renewed at definite intervals; otherwise it must prove a dead weight and a loss of animal energy. This gives a satisfactory explanation of the fact, that obese people are lacking in strength and vital energy, and that an active mode of life, although at first difficult to undertake, proves the best cure for their multiform ailments, and should always be part of the treatment of obesity.

Animal Strength.—According to Hirn, in a state of repose a man consumes per hour 30 grm. of oxygen (which must unite with about 11.5 grammes of carbon in the body), which produce 150 heat units which go to keep up life; while one hour's work on a treadmill required 150 grm. of oxygen (56 grm. carbon), which produced 750 heat units, 500 of which went for maintaining life, while 250 heat units represented an hour's work. The amount of oxygen breathed during work was thus five times as great as during rest. On the basis of these data, an amount of food equivalent to 9 oz. of coal is sufficient to support life daily, and this is about the quantity of carbon taken in the food.

During work there must be about $\frac{3}{4}$ of a grain of carbon burned in the human body, every second, and the oxidation of 11 grains of coal in man produces one unit of heat available for work, while the same energy would result of the combustion of $2\frac{1}{2}$ grains of coal in air. Therefore, less than one-fourth of the available heat is turned into actual work.

From data contained in "Appleton's Cyclopædia of Applied Mechanics," we learn that the American boat engine, with a net power of 1,446 horses, consumes four pounds of coal per horse-

power per hour. Four pounds of coal burned in air produce 16,000 Mayer units, or 1,472,000 kilogrammes metres, that is, nearly six times as much energy as is available in the above engine. But engines generally utilize between one-tenth and one-fifth of the potential energy of coal, seldom more.

The ordinary work of a horse may be stated at 22,500 pounds, raised 1 foot in a minute for 8 hours per day, that is 8,800,000 foot pounds daily; that of an ox is about 7,000,000; that of a mule about 5,800,000, and that of an ass about 2,570,000. Human strength is considered 2,520,000 foot pounds a day. Dr. Bureq, of Paris, has ascertained that human strength will increase 25 per cent. and more under gymnastic training. The weight, size, and body strength of men differ with different races, however, and it is said that in railroad building it requires three Chinamen to do the same amount of work as two white men.

On the basis of Hirn's calculations a man at work 10 hours, producing 2,500 heat units, would (if these are Joule units) raise 1,930,000 pounds one foot. Foster, quoted above, figures the day's work of a man at 150,000 kilogrammes raised one metre, which is somewhat less than the above.

According to Hirn, 7,411,200 foot-pounds, or 9,600 J. units would include the living force and the mechanical work of man for 24 hours. But, as 280 grm. of carbon are taken daily, this, burned in air, would generate 1,680 M. units, or 153,560 metre-kilogrammes. Although these results are but approximative, and do not always quite coincide, yet their value is obvious till more such experiments have been made.

According to Draper, the human body produces 188.7 units of heat in one hour, while lying at rest in a bath, and according to that, the heat generated by the human body equals 2.3 units M. for each gramme, while that generated by the combustion of charcoal is 8.

The *Scientific American* has also published the following statements: After a few hours of hard work, a loss of a few pounds is perceptible in the human body. The heat daily evolved from the human economy is equivalent to 6,800,000 foot-pounds, one-tenth of which is available for external work.

In his experiment on dogs, Senator found that while 18.8 units of heat were produced soon after a meal, in one hour, the same animal produced only 10.9 in the same length of time after fasting 2 days.

Correspondence of Animal Heat and Work.—Horvath, in his observations on marmots, found that the internal temperature of the animal when awake was from 35° to 37° C., while in the hibernating condition, it was reduced to 10° , 9° , or even to 2° , according to that of the surrounding air. On awaking, the temperature rapidly rises, so that here vitality is equivalent to a force which would heat the volume of the animal's body to 35° C. and maintain it at that temperature.

The subject of Draper's experiments, mentioned above, weighed 180 pounds—about 30 more pounds than an average. The weight of Hirn's is not mentioned. Draper's man produced in an hour's time 38 more units of heat than Hirn's at rest, but 572 units less than Hirn's subject at work. The 38 units in the first case most probably represent the amount of heat produced in the human body to make good that lost in heating the cold water of the bath. This experiment is very crude at best, and it is strange that Dalton cites it and omits those of Hirn. At the same time, the experiments of Draper give evidence to the fact that the human body, while keeping its normal temperature in a cold medium, does so at a definite amount of internal work, which increases as the temperature decreases in the surrounding medium.

Should Hirn, instead of causing a man to raise his own weight on a tread mill, have given him some mental work to perform—some problem to solve, or some speech to prepare, he would have thus ascertained the mechanical equivalent of thought, which has been ascertained in another manner at least as delicate, which we will soon describe.

Just as a part of the heat of a furnace is lost before the water in the boiler begins to dilate into steam, so in the human machine, the temperature of the body increases even more than one degree during work (Jürgensen).

Another important fact has been ascertained by Beclard. This experimenter found that when one raises a weight the heat thereby

generated in the muscles of the arm is much less than that produced by the same muscular contraction without weight. For, in the latter case, the heat fails to become work and must appear as a rise of temperature.

This satisfactorily explains the fact often observed that violent delirium takes place with but a slight rise in the body temperature, while the highest temperatures accompany a low muttering delirium. The first condition is especially common in traumatic delirium, delirium tremens, and the delirium of any form of meningitis. Here, as in Beclard's observations, the heat generated in the circulation becomes transformed into the work of delirium, a small portion only being appreciable as heat.

This delirium, or external work, seems to be beneficial in such cases, inasmuch as it forms an outlet for the excessive amount of heat produced by the rapid chemical changes which take place in the human body under the influence of certain diseases. And, in cases of high temperature, the efficacy of cold so applied to the body as to absorb its heat, is in this same manner rationally explained. So is the soothing influence of muscular exertions in cases bordering on acute mania thereby explained; the internal heat is transformed into well regulated muscular action, instead of appearing as disordered nervous work.

Psychometry.—There can be no doubt that by ascertaining the rise of temperature in the brain during the act of thinking, the mechanical equivalent of the thought could be accurately established, but thought has been measured by means of the plethysmograph, invented by Dr. Mosso, of Turin, prior to 1876.

This instrument is calculated to measure the amount of blood consumed in the acts of the mind. It indicates through a fluid medium the increase and decrease in the volume of an organ under various stimuli. When the forearm is tightly inclosed in a cylinder of water to which communicates a rubber tube, any variation in the volume of the forearm is indicated by the pressure of the water in the tube, and an indicator records the variation. But it is found that variations of volume in the forearm are correlated with the increase and decrease of blood supply to the brain—the circulation increasing in the extremities, it decreases in the brain, and *vice-versa*.

Accordingly, the plethysmograph indicates how much more blood is consumed in one person's brain while solving a problem than in another working at the same. Even the mental impressions made on the subject by the presence of certain persons have been measured by that delicate instrument.

802 S. HALSTED ST.

ARTICLE IV.

EXTERGE OCULUM. By C. R. EGGEMANN, M.D., Surgeon to the City Eye and Ear Clinic of Detroit, Mich.

As there is no literature on this subject, I will proceed to give the history of it. Dr. Liebold, of New York, uses this method with very few exceptions, which will be spoken of later on. Patients who had enucleations performed complained that the artificial eye had not sufficient motion, as there was not stump enough to give the requisite amount of motion expected by them. This induced Dr. Liebold to use this method, and I look upon him as the inventor of this operation, he having taught and practiced it for many years. The indications for the operation I will give in the Doctor's own words: "I regard all those for good, in which enucleation is practiced, except in cases of intra-ocular tumors, or where a tumor has invaded or is liable to invade the sclera."

The steps to the operation are as follows: The patient being anæsthetized, the lids are held apart by a stop speculum, and the bulbus firmly with the fixation forceps, then the eye is transfixed with a Graafe knife in the horizontal diameter, about two lines from the sclero-corneal junction, or posterior to the ciliary body, then cutting either upwards or downwards as the operator thinks best; the fixation forceps are removed after completing the incision, the flap is grasped by the same, and the remaining portion is cut away with scissors curved on the flat. The principal point is to remove all the ciliary nerves from their entrance into the carpus ciliare. Then interior of the eye is *wiped out*, as it were, with small pellets of lint, the latter being held with the fixation forceps, removing thereby the retina, choroid and ciliary nerves, leaving nothing but the white sclerotic with the muscles attached

The conjunctiva can be united with two sutures over the opposite recti muscles, or the sutures can be omitted and the sclera allowed to become glued together by the proliferation of cell elements. The after treatment consists in cold water dressings, or the application of an icebag. Apply as long as patient feels comfortable with it, being guided by the feelings of the patient. There is no trouble from secondary hæmorrhage as it sometimes happens after an enucleation, in cases where the arteries are diseased, for in the former the arteries entering the eye are twisted by the motion of wiping out the eye, while in the latter they are cut transversely. The swelling is inconsiderable and subsides soon. The stump is larger and moves better, as all the external muscles remain in their original position. The objection that an artificial eye will irritate easier is groundless, if it is too large it will irritate the branches from the *nervus naso-ciliaris*, whether the sclera is preserved or not.

What spurred me on to write this article, is the limited experience I have had with this operation. Jno. K., æt. 37, laborer in the car shops of Detroit, was hit in the right eye with a piece of wood, July 24, 1882. He came to my office a week later to consult me. Status præsens, right eye, chemosed conjunctiva protruding from external canthus, cornea had been ruptured in the whole horizontal diameter, and became agglutinated again, iris adherent to inner surface corresponding to the laceration of the cornea. Tension. Complains of terrific pain in and around eye. Left eye shows signs of sympathetic irritation, conjunctiva considerably congested, profuse lachrymation, iris contracted, but responds well, also photophobia present. Advised enucleation, explaining to him the danger he was in of losing the left, his sound eye, to which he willingly consented. Assisted by Mr. Sommers, then a medical student, I proceeded to operate. Ether was given to him to blunt the sensation, I applied the speculum, and had completed the circular cut through the conjunctiva around the cornea previous to detaching the muscles, when an accident occurred, caused by the patient holding his breath, which opened slightly the old wound, allowing the contents to partially escape. Knowing that I could not use the strabismus hook to lift up the muscles without having the eye collapse, the teachings of Dr.

Liebold came to my rescue. Instead of enucleating as I intended, I *wiped* the contents of the eye out as above described. I did not apply any sutures. The after treatment consisted in cold water dressings. Fitted the patient with an artificial eye two weeks after the operation. The movements are good in, out, up or downwards. I have seen the patient several times since, and he is well pleased, saying that he has motion to the artificial eye, while a fellow workman, who had an enucleation performed, has not any. So much for an accident. Hoping this operation will in time supersede enucleation and optico, ciliary neurectomy, or any of the operations for total staphyloma of the cornea, I will close with a few remarks on the title of this subject. Dr. Liebold has named the operation "Evacuatio Bulbi." We have the contents of the eye escaping in the operations for total staphyloma of the cornea, and I think this title does not apply to the operation as well as the one I have selected, namely, "Exterge Oculum," which means, *wipe out the eye*.

170 RANDOLPH STREET.

ARTICLE V.

POSTPARTUM MALARIAL FEVER. By P. D. BURDICK, M.D.

In this zymotic country, where it would appear at times as though scarcely any animal life is free from their noxious influence, where can be traced evidences of them in nearly every species of disease peculiar to the climate, many disorders deriving their first cause from the contaminating influence which they are supposed to exert, it could scarcely be deemed presumption in one if he were to pause in his wonderment at their universality and the part which they are presumed to play in the etiology of disease, and ponder if, indeed, they are not the prime factor in all the ills which flesh is heir to.

Vague and unsatisfactory as our understanding of miasm is, the term *malaria*, dedicated to express a condition easier conceived than demonstrated, one that, had not the orthodox definition of that spring in the human breast, described as the substance

of things hoped for, the evidence of things unseen, been so long associated with the word used for its appellation, it might be misjudged which it was intended to define, faith or malaria.

To question its nomenclature is to call into question the existence of the hypothetical germ itself, which, at the present stage of our knowledge, one might as well doubt his catechism. It would but expose the "doubting Thomas" to well trained batteries filled to repletion, or place him among the unenviable list of nihilists or heretics, taught in the amphitheater and laboratory that the baneful effects of a fog are due not to the fog itself, but to an impalpable molecule of decomposed vegetable matter, so disguised and tucked away within the little humid sphere as to be beyond the ken of the chemist.

Though analytical chemistry can draw a line so fine among particles of matter as to determine where the atom leaves off and where the molecule begins, and teaches us that the smallest division of matter that can exist in a free state is a molecule; that the surrounding media, termed atmosphere, is made up of oxygen, hydrogen, nitrogen, carbonic acid gas, impurities, etc., giving the exact proportion of each, yet fails to take the fog, which can be caught in a hat, or collects itself all over every thing exposed to its misty sheet, and explain to us what this miasm is that we hear so much of floating around in its vehicle of moisture and what, indeed, are its generic forces.

Professor Salisbury displayed a commendable disposition in catching some vapory emanations upon some fragments of glass and analyzing them, establishing the fact, seemingly to his own satisfaction, that the form of fever generally denominated malarial is the result of the introduction into the system of spores or cells of certain species of algoid plants, termed palmellæ; but it has been a long time since Professor Salisbury and his pieces of glass were heard from, and the impression pretty generally prevails that the only well authenticated point which the professor succeeded in thoroughly establishing is the fact that he was a little too previous.

It is a custom fairly observed when discussing medical topics, and reference is made to the ancients, to do so with a degree of charity, and it is not our plan to break in upon this time-honored

custom of the faculty, or to infringe upon any of the established precepts nor trample upon well regulated rules.

When the subject of malaria is thrust upon us our thoughts naturally wander back to that period when, to use the parlance of to-day, the indications of the barometer would have signaled a lowering temperature, and at such times there might have been seen creeping up and down the banks of the inner seas among the bayous and fenlands of that oriental country, wherever the low lands and capricious ill winds favored, bearing with it seeds of fever, which in those days meant depopulation and death, a dense heavy mist or fog.

And when I contemplate on this fevered element a responsive chord in my sympathetic nature is touched, for that people who were so unfortunate as to have existed at a period when the best science of the times attributed a plague which should follow in the wake of a prevailing mist, to the wrath of an offended God ekeing his vengeance out upon them, because of their sins, either of omission or commission, and what is indeed sad, that they should have passed away—gone down to their graves—without ever having heard of the zymotic theory, without ever having learned that their revengeful God wasn't anything but a fairy-like tale of zymots in a fog.

How pleasant would have been the task had it fallen upon, or had it been within our province to acquaint them of all this, providing their natures were not so inquisitive as to insist upon knowing just exactly where the zymotic part of the fog came in.

But I had purposed speaking briefly of a fever which has been producing more or less havoc down in our part of the country; a fever which for convenience sake I shall pass under the *nom-de-plume* of postpartum malarial.

It has been my experience, if the parturient woman is in any way suffering from sluggish secretory organs; if the hepatic circulation is impeded in consequence of engorgement, which I find to be particularly common among females during gestation in this climate, and as a result impaired secretion, indigestion and assimilation; if this condition of things be not critically looked after before and up to the time of labor, the exertion, overwork and shock, which the patient from the very nature of things sus-

tains from the parturient act is very apt to result in what in my judgment is the sequel of it all, a fever.

The immediate danger of which lies not so much in the fever itself if properly handled, as upon an error in diagnosis, which one is very prone to make, owing more particularly to the character which the lochia assumes upon the incipency of the pyrexia, leading one to believe that the abnormal increase of temperature is wholly dependent upon, and the result of, the absorption into the system, through the exposed vessels of the uterus, of putrescent matter or lochia seriously altered in character.

If this idea is allowed to prevail, and medicines adopted calculated to meet seemingly the marked indications ascribing the constitutional disturbance to purely a local cause, there is danger ahead.

I am misinformed if there have not been some twenty lost in a little city where I had been summoned not long since to see a lady suffering with this malady, which has come to be looked upon by the women of that section as a scourge, dreading the approach of labor with the horror almost of death.

Clinical history discloses the following :

They may feel comparatively well, and it is not at all uncommon for them to have enjoyed good health up to the time labor sets in ; but as a rule they suffer occasionally from slight attacks of biliousness previous to this, generally, in their belief, too slight to justify consulting a physician.

Two, three, or perhaps more days even may elapse after labor—which, supposing it to have been propitious, is over—before any untoward symptoms become manifest. Up to this time, I repeat, in substance, there may not have been a single symptom, or but a single symptom which would cause the accoucheur to anticipate any change in the condition of his patient, or that could possibly lead him to suspect any unfavorable turn in the case, and it is only from my own experience that I can speak in regard to this, and that is the appearance which the tongue presents, which may be said to have to be seen in order to be fully appreciated, for its general characteristics are subject to modifications altogether owing to the temperament of the patient, hence no one feature is invariably present, but as a rule a dark viscid coat is noticeable

on its posterior aspect, and this may or may not be accompanied with a slight sallow, tawny, or dirty hue of the skin.

Rigors announce a sudden change in the history of the case. The countenance takes on a pinched and anxious look, in time becoming wearied, as though something appalling was about to come to pass.

The lochia, from this time on, either ceases altogether or becomes scanty and green; more or less tenderness supervenes over the womb and its appendages, in some cases becoming so severe as to necessitate the adoption of active, energetic measures intended to relieve the pain, at other times so slight as not to give rise to any particular inconvenience.

The pulse rises rapidly, assuming a wiry, vibrating movement, the thermal register indicating great increase of temperature. In fact, there is every evidence of septicæmia, and so rapidly are the symptoms incident to this condition developed, that unless the physician has taken cognizance of the real condition of things, or should he fail to immediately after the decided change takes place, the case receives only such treatment as is calculated to meet the indications of the already alarming symptoms.

The treatment generally adopted for blood poisoning is instituted, antiperiodics in heroic doses, and the overloaded secretions are lost sight of for antiseptics and diffusible stimulants. Cardiac sedatives are used sparingly, sinking spells occur and recur, fear takes possession of the patient, and generally within from two to four days, with varying symptoms, it becomes painfully apparent that her forebodings are only too well grounded, and not the product of a perturbed mind or the hallucinations of a fevered brain, as evidenced by the flagging pulse, the failing strength.

A few more sinking spells, stupor supervenes, the curtain falls, the scene closes, and death claims its victim.

THE masterly article written by Dr. E. W. Jenks, and published in the Gynaecological Transactions, on "The Practice of Gynaecology in Ancient Times" has been translated into German, and appears in a recent number of the German "*Archives of the History of Medicine.*"

Hospital Reports.

ARTICLE VI.

COOK COUNTY HOSPITAL REPORTS. REPORTED BY DRs. E. P. DAVIS AND C. E. CURRIE. ATTENDING PHYSICIAN, DR. MCWILLIAMS.

Name, A. L., civil state M., Race W., age 40, occupation laborer, nativity german, diagnosis insolation. Admitted July 3, 1883, hour 4:50 P. M., discharged July 5, 1883, condition recovered. Service of Drs. McWilliams and Buchan, C. E. Currie, House Physician.

While at work, patient suddenly fell unconscious, and was taken to the hospital by police patrol wagon.

On his arrival at 4:50 P. M. his temperature was 107.5° axillary. Face pale, lips and finger tips bluish in color, pupils contracted, respiration stertorous; the surface of the body felt intensely hot; bowels had moved involuntarily.

He was placed in a wet pack with ice in the axillæ, groins, and at the back of neck. Pieces of ice were then rubbed outside of wet sheet over the abdomen and chest.

5 P. M., 108° rectal. Gave a large enema of ice water morphinæ S gr. $\frac{1}{3}$ hypodermically. Gave spts. frumenti hypodermically as his extremities became cool.

6:30 P. M. Patient had a tonic spasm and remained in opisthotonos for about three hours. The muscles of his jaws were firmly contracted. Constant twitching of the eyelids. Patient was removed from pack and placed in bed.

July 3, 7:00 P. M., 102.5° axillary. Gave quiniæ bisulph. grs. vi. hypodermically.

9:30 P. M., 104.5° rectal. Placed in wet pack and applied an ice-cap. Patient to be removed from pack when temperature fell to 102°.

11:30 P. M., 102.8.

July 4, 1:30 A. M., 101.5°. Patient was taken from the pack and the ice-cap removed.

6:30 A. M., 74, 99.2°. Patient seems perfectly conscious, but will not answer questions. Pupils normal; respiration normal; is perspiring freely. R. potass. bromide grs. xx., t. i. d.

4 P. M., 72, 98.6°. Watch temperature.

5 A. M., 72, 99°. Patient is perfectly conscious and talks rationally. Recollects nothing which happened July 3. Discharged recovered.

ATTENDING PHYSICIAN, DR. BUCHAN.

Name, G. J., civil state S., race W, age 25, nativity Sweden, diagnosis insolation, admitted July 6, 1883, hour 9:25 P. M., discharged July 9, 1883, condition recovered.

Patient had received treatment before he was brought to the hospital. On admission he was in a wet sheet with pieces of ice about him. Extremities cold, pulse weak, temperature 104.5° rectal. Hypodermics of spts. frument. and morph. sulph. Muscular twitchings and tonic contraction of muscles of neck and back.

Patient was placed in a wet pack until temperature was 102°. Ice-cap was allowed to remain during the night and the next day.

July 7, A. M., 104, 101.4°. Patient has taken nourishment and answers questions rationally.

2:00 P. M., 80, 98.6°.

8:00 P. M., 80, 97.6 axillary. Complains of cephalalgia, potass bromide grs. xxx.. Remove ice-cap.

July 8, A. M., 88, 98.4°. Slight vertigo on attempting to walk; sal Rochelle ʒs.

7:08 P. M. 62, 99°.

7:09 A. M., 76, 98.4°. Discharged recovered.

Belladonna Poisoning from Atropia.—In the case of a boy aged 15, a solution of atropia, grs. iv. to the ℥, was used for keratitis, two drops were put in the eyes every five minutes for half an hour to secure thorough dilatation of the pupils. The application was made in the morning, and no constitutional effect was observed until early the following morning, when the patient became excitable, and very apprehensive of violence. He grew better at daybreak, and said that he had been threatened by an adult patient in the ward, whose bed he had shared during the night.

The dilatation of the pupils was maintained by atropia used sparingly during the day, the patient appearing as usual.

At evening well marked delirium occurred; the eyes were brilliant, the throat somewhat dry; the delirium was busy, ecstatic, and, when the patient was not restrained, happy. Restraint was finally necessary, and under the use of morphia hypodermically, the patient speedily recovered. Withdrawal of the atropia and its subsequent use in weakened solution were followed by no return of the delirium.

Tetanus Traumatic—Nerve Stretching.—A colored man, very muscular, on June 19, jumped upon a pile of boards, running a rusty nail half an inch into the sole of his foot. The wound became swollen and painful, and in a week after the reception of the injury, stiffness of the muscles of the neck was felt. On admission, trismus was well marked, opisthotonos followed, with convulsions. June 24, the great sciatic nerve of the affected leg was exposed and stretched by the house surgeon; temporary relief only followed.

Convulsions increased in frequency and severity; the temperature rose, and after an unusually severe spasm, the patient died July 2.

Chronic Cystitis, Cystotomy.—In a patient who had suffered for over six months with cystitis, incision into the bladder in the median line of the perineum was made; the finger was introduced, and the bladder explored. Its walls were found thickened, but lacculated stone was discovered.

Mild injections were employed, and free drainage maintained through the incision. The patient was greatly benefited.

Society Reports.

ARTICLE VII.

CHICAGO MEDICAL SOCIETY.

The Chicago Medical Society held a regular and well attended meeting June 18, 1883, in their club room in the Grand Pacific Hotel, with Dr. D. W. Graham in the chair.

After the usual routine of business, Dr. Henry Ogden presented a valuable paper on Obstetrics. This topic was made more interesting and prolific by a carefully written report on a "Trio of cases of Triplets," and exhibition of a placenta in one of the births.

Report published in full in this number.

A supplementary report was given, wherein Dr. J. W. Edwards of Mendota, had kindly furnished Dr. Ogden a case of triplets three girls, born to Irish parents on the morning of June 3, 1881, in that city; there were three separate placentæ in this case, and the children are now two years of age, and all living.

In the discussion, Dr. Mary H. Thompson said she had been much interested in the subject, and thought the paper a good one.

Dr. Henry VanBuren said he had attended 100 cases of labor before he had a case of twins, and attended 300 births when the case of triplets occurred as reported in the paper. He thought there was a peculiar throwing power in the fundus of the uterus in triplet births. The contractions of the uterus were peculiar, and different than in single births, and the cords were shorter.

Dr. H. D. Valin thought there some omissions in the paper

that should have been further dwelt upon, especially regarding the history of the parent's parents.

Dr. C. W. Earle examined the case with Dr. VanBuren, in which there was but one placenta and three cords, and substantiated the report in the paper; he also reported a case occurring in the practice of Dr. White in 1879, in this city, where three male children were born, their aggregate weight being ten and a half pounds, but all died in three weeks of inanition; he thinks heredity has no influence regarding multiple births.

Dr. Houghton related a case occurring within his knowledge, of a woman giving birth to twins three times within the space of three and a half years.

Dr. J. H. Etheridge knew of a family in Canada, where in six confinements sixteen children were born, as follows: Four times triplets, and twice twins.

Dr. L. H. Montgomery knew a German family, residing near Shulsburg, Wis., where he formerly resided, and studied in his preceptor's office, in the summer of 1869. Dr. M. A. Fox then attended the man's wife, some five miles distant, and three boys were born. Just after the second boy was born, the woman fainted, and while in this state of syncope, the third child was born, when she recovered in a few moments, and upon being informed of the number, she expressed herself in Teutonic dialect, that, "dos ish kneuf." I visited the noble woman next day to see "if any of them had got away." She recovered rapidly, and so far as I know, the boys are yet living, and are about fourteen years of age.

Dr. E. Ingals, chairman of the committee appointed at the second previous meeting to confer with the Illinois State Board of Health relating to matters contained in the proceedings of the quarterly meeting of said Board, held in this city April 12, 1883, submitted the following report:

TO THE CHICAGO MEDICAL SOCIETY.

Your committee appointed to confer with the Illinois State Board of Health relating to matters contained in the proceedings of the quarterly meeting of said Board, held in Chicago, April 12, 1883, ask leave to submit the following report:

We desire to acknowledge the courtesy of the Board in furnishing us, from its official correspondence, all the information we desired relating to the subjects under consideration. The following from Secretary Rauch's report to the Board, could not escape the attention of the profession, and seems to call for some action on its part:

Proofs are on file that students are graduated without having studied the required length of time, or without having studied under a preceptor; who have attended only one course of lectures; who have attended two courses in one year, without the necessary reading period intervening; who were not 21 years of age at the time of graduation, and who, in general, are not at all competent to practice medicine.

While preparing this portion of my report, the following case in point presents itself. An official proceeding requires that Dr. —, a graduate of one of the most popular and widely-known colleges in the country, detail his acquirements in pharmacy. He is asked what experience he has had in compounding medicines, and replies that he has had none.

"Did you not put up prescriptions under your preceptor while a student?"

"No, sir; I didn't have any preceptor."

"Why, I supposed that medical colleges required that their graduates should have read or studied medicine under a preceptor for three years. How did you get through? How did you graduate?"

"Well, I attended two courses of lectures, paid the fees and got my diploma."

An examination of the files in the secretary's office resulted in finding the following communication from Dr. —, received May 20, 1882:

—————, ———, Ill.

To the *Secretary State board of health* Dear Sir I sent you my *dipluma* early last March and have not head from it *sine* did you receive it or do you know anything about it I am becoming quite anxious concerning its *saftey* My *dipluma* is from——— Medical College——— dated ——1882 I also sent

you a letter containing a one dollar bill to pay for the *certificate*. If you will give me the information I *request* I shall be greatly obliged to you.

Yours very respectfully

_____ M.D.

In the annual announcement of the college which issued this diploma, among the regular requirements for graduation one is stated to be "such primary education as is clearly requisite for a proper standing with the public and the profession;" and another that "he must have pursued the study of medicine three years." That the former requirement was ignored is obvious from the letter quoted; and it is probably doing no one injustice to accept Dr. ——— statement—that he "attended two courses of lectures, paid the fees and got a diploma," as full summary of his medical education, so far as the college was concerned.

As a result of my own official experience during the past six years, I think it entirely within bounds to say that a strict adherence to the advertised requirements is the exception among colleges rather than the rule. In fully three-fourths of those which have come under my observation, there have been irregularities of more or less gravity.

The charges that "students are graduated without having studied the required length of time, or without having studied under a preceptor; who have attended only one course of lectures; who have attended two courses in one year, without the necessary reading period intervening; who were not twenty-one years of age at the time of graduation. and who, in general, are not at all competent to practice medicine, are based on correspondence on file in the office of the Board, and on other evidence that has come to its knowledge. On first reading Dr. Rauch's report, we suspected that the Board had been imposed upon in the matter of the letter above quoted, and that it was spurious; for we did not believe that after the subject of a higher medical education had been as thoroughly discussed as it has been for a number of years, and the judgment of the profession in its favor was so pronounced and well understood, that any recognized, popular and widely-known college would, only one year since,

confer the degree of Doctor of Medicine on a person who would write this shameful letter. The history of this transaction is as follows: This graduate forwarded to the Board of Health his diploma, and with it his affidavit that he was the person on whom the degree was conferred. The diploma and affidavit would entitle him, under the rules of the Board, to receive without question his license to practice in Illinois. To his communication he neglected to append his address, and consequently he received no reply, and this circumstance in due time called out the above letter. Now, the signature to this letter and that subscribed to the affidavit, we know from personal inspection to be by the same hand. According to our statute and ethical laws this graduate is entitled to every right and privilege that is accorded to the most accomplished practitioner in the State, and only the accident of the omitted address brought the transaction to public notice. The following form, rendered in our own vernacular tongue, embraces the substance of the diploma issued by all of our medical schools:

"Whereas, it is an established usage to confer academical degrees on those whose character and knowledge entitle them to respect and confidence; know ye that ———, having complied with the requirements of our College, and given ample evidence of his learning and skill, we have by authority of the State of ——— conferred on him the degree of Doctor of Medicine, together with all the rights and privileges thereunto belonging. In testimony whereof, we have granted this Diploma, signed with our hands, and sealed with the seal of our college." It is a sad reflection, that a man who has misspelled above ten per cent. of the words of this simple letter above quoted, holds a diploma, signed by the faculty and officers of a recognized medical college, as proof that "he has complied with its requirements and given ample evidence of his learning and skill." We have the authority of a member of our State Board of Health for saying, that there are on file in its office not less than two hundred instances of graduates in medicine who hold this dubious evidence of learning, who cannot spell diploma. We have been furnished from this source with seven different and incorrect ways of spelling this word of seven letters. They are as follows: diaploma,

diplomy, diplomer, diplomah, diaplemy, diapluma, diploma. It seems a marvel that these ingenious orthographers have all agreed to commence the word with D. The sad comedy of this subject is worthy of the pencil of a Hogarth. Fancy the Alma Maters of these two hundred ignorant persons, solemnly conferring on each of them the Degree of Doctor of Medicine, in consideration of "his having complied with the requirements of our college, and given ample evidence of his learning and skill." But when we think of such a person at the bedside of the sick, clothed in professional authority, the scene suggests a delineator of tragedy rather than comedy. We have no direct means of testing the medical attainments of these two hundred graduates; but every one knows that it is impossible for such uninstructed minds to acquire in any degree the knowledge essential to a decent discharge of the duties of a practitioner of medicine. All will admit that the practice of conferring degrees on such illiterate persons by our institutions of learning should be stopped; but it is not quite clear what methods are best for accomplishing this result. The efforts of the State Board "to secure one common Examining Board on preliminary education for the six medical colleges of Chicago" is to be commended. The secretary of the Board has communicated with all the medical colleges of this city on the subject, and a number of them have given the proposition their approval, and expressed a willingness to co-operate in carrying the purpose into effect. The rule now adopted by our State Board, of not recognizing any college as in good standing that does not require of the student evidence of the possession of a fair degree of primary education before he is permitted to matriculate, if honestly complied with by the colleges, would keep all these persons who cannot spell diploma out of the profession, but to cover all contingencies, it would be safer for the sick to allow none to practice without a license, and to license none but graduates who had passed a satisfactory examination before a board constituted for the purpose, which board should be independent of the schools that confer the degree of Doctor of Medicine. Our Board of Health should freely exercise the right it has to refuse to recognize diplomas of schools of doubtful char-

acter, and to revoke the certificates of all practitioners who clearly convict themselves of being unworthy to retain them.

Our State Board of Health commends itself to the confidence of the public to the extent of the acquirements which it expects of non-graduates, who apply to it for a license to practice, as shown by the printed list of questions submitted for answer to the applicants who presented themselves for examination at its last meeting. The standard required was not too high, but if it is maintained it will drive applicants to the colleges for a degree, as an easier way of entering the profession than to go before the State Board for an examination. No license to practice was issued to non graduates at this meeting, as none of the eighteen applicants could correctly answer eighty per cent. of the questions given. The public more than the profession are interested in a proper solution of these questions.

(Signed.)

E. INGALS,	}	<i>Committee.</i>
R. G. BOGUE,		
A. H. FOSTER,		

After its reading, Dr. S. Strausser moved that the report of the committee be received and the gentlemen discharged; seconded by Dr. J. H. Etheridge, and the motion was carried.

Dr. R. E. Starkweather thought the information contained in the report should be more extensively promulgated, and moved that the secretary be authorized to have printed 500 copies, and distributed to the members and others in the profession. The motion was discussed at some length, but did not receive a second. Dr. Earle thought our salvation need not lie in the State Board of Health, especially regarding their views on spelling, old doctors—many of them—could not spell good, but were splendid practitioners.

Dr. J. A. Robison quoted the remarks he had heard at the recent meeting of the State Society, by a member there, who said, "Students that go into perceptor's offices should be better educated, and to get at the bottom of this important subject, perceptors should require of a student more thorough preliminary education before entering the study of medicine.

Dr. Ethridge argued at length upon the subject of Medical

Education, and a preliminary examination of students. He thought but very few doctors anywhere could answer 50 per cent. of the questions pertaining to the 998 medicines in the works on therapeutics.

Dr. Starkweather also spoke of the merits a student had to possess before he would be admitted in Cambridge college or the Oxford school, England; and then the Society adjourned for two weeks.

L. H. M.

P. S.—Since the paper in the first part of this report was read a woman on Emma street, in the north west portion of the City has given birth to three children. All were alive and are doing well, along with the mother.

L. H. M.

ARTICLE VIII.

CHICAGO MEDICAL SOCIETY.

The Chicago Medical Society held a regular meeting July 2, 1883, with the President, Dr. D. W. Graham, in the chair. The minutes of the previous meeting were approved, as read by the Secretary.

Drs. E. J. Doering and Wm. J. Gates were elected to active membership.

After additional routine business had been transacted, Dr. Simon Strausser read a paper on "How Doctors and Medical Societies Should be Made More Efficient."

ABSTRACT OF THE PAPER.

The life of a physician is one of great care and responsibility, more thorns than flowers are strewn in the path of the arduous duties of his profession, and he loses at least one half of his earnings by being a poor financier, or through unscrupulous persons, or by his own charitable nature, or from an ever exacting public, who frequently fail to pay him for services rendered, and then add insult to injury by defaming the character and skill of their former attending physician.

The druggist frequently uses his power to injure the independent and honest practitioner—besides depriving the doctor of a fee by taking upon himself the duty of prescribing his own medicines, or unnecessary delay in preparing what was previously prescribed by a physician, which may cause great injury to a patient or jeopardize life. A satirical remark by an elderly physician is frequently made in public of a younger brother, especially if the younger Esculapius is poor in pocket, and has just entered upon his professional career.

These are a few of the difficulties to be overcome, that beset the practitioner in his pathway, and how can this be remedied? Can the combined influence of this honorable association do anything to bring about this desired change?

Again, it is humiliating to every honest, upright, and honorable physician, to see men in our profession using political tactics for office or position, or through chicanery be called before the courts in the capacity of an expert, instead of their merits or professional ability being known, and resulting in their being called to give expert testimony. This society has frequently been held up to the public gaze in scorn for the ignorance displayed by the so-called expert, thus throwing a cloud upon the fair name of our honorable calling.

We have in our midst men learned in the sciences, who are earnest and honest laborers for the advancement of professional learning, and are thoughtfully meditating how best to eradicate these evils.

Regarding our County Hospital management, it is to be regretted that it is done in the interest of political aggrandizement, the warden being appointed regardless of his fitness and ability, and this Society should use every honorable means to call public attention to this abuse. Many young lives might be saved if there were special wards provided in our hospitals for certain specific ailments.

Our united efforts should be exercised in sustaining the local and State Boards of Health, and abattoirs and other dealers in cattle, poultry and milk should be watched with a jealous eye, thus lessening the cause of mortality. To be sure, a law exists

for the punishment of those adulterating food, but is it ever enforced?

It becomes our duty to urge upon the authorities the necessity of the faithful enforcement of this law. This Society should exert its influence with the public in the erection and maintenance of a hospital for children, and to correct that greatest of all evils existing in our large cities, that causes such frightful loss of life and untold misery and disease, viz. prostitution. The writer concluded by admonishing his brethren to be true to each other, moral and conscientious, and that we unite in the advocacy of a "State Board of Examiners," with a graded and thorough examination for the degree to which we aspire, and thus we will be more efficient, individually and collectively.

In the discussion, Dr. C. T. Fenn first remarked, by stating he scarcely knew which to consider in the paper, so he asked the author if the field gone over was not too extensive for the announcement, and that it was too sweeping in character; was the paper read to benefit the Society?

Dr. G. C. Paoli thought if a "Bismarck" was in this country, the writer's ideas might then be carried out. Regarding the County Hospital management, all we could do would be to agitate the question alluded to in the paper, and instruct the county commissioners as to their duties. He knew Dr. Strausser meant well by advocating what he did, but thought he was taking too dark a view of his subject.

Dr. Strausser answered both gentlemen who had preceded him, and said his object in reading the paper was to benefit the Chicago Medical Society and improve us. To do so, he thought the constitution and by-laws would require first to be changed. He had the good of the profession at heart and meant well, indeed, and offered a motion that a committee of five (5) be appointed by the chair to revise or amend the constitution and by-laws, and report at the first meeting of the Society in the fall.

The motion was seconded by Dr. A. R. Reynolds.

Chairman Graham retired temporarily, and called Dr. Paoli to the chair.

Dr. G., who was opposed to the motion, spoke in a pleasant and entertaining manner for some minutes. He did not think

we ought to revise the constitution and by-laws. He thought Dr. Strausser had a dark view of everything in the Society, the same as frequently occurred to young members.

The motion was then put and carried, resulting in the appointment of Dr. S. Strausser, Dr. G. C. Paoli, Dr. C. T. Fenn, Dr. C. W. Purdy, Dr. D. R. Brower.

Miscellaneous business—none.

Adjourned.

L. H. M.

ARTICLE IX.

CHICAGO PATHOLOGICAL SOCIETY.

Regular meeting, June 11, 1883.

The Society was called to order by the President, Dr. Angear.

The minutes were read and approved.

Drs. Isabell R. Copp and C. A. Sanders were elected to membership.

The following named gentlemen were proposed for membership: Drs. R. N. Hall, J. E. Harper and E. E. Holroyd, by Drs. Angear and Tebbets.

The Society then listened to the reading of a paper by Dr. E. P. Murdock, entitled, "The Immediate Operation for Repair of Lacerated Cervix."

The author stated that reproduction is a pathological process, although a proposition not in accordance with the views of the most eminent teachers of physiology; he would not limit the term pathology to conditions wholly unnatural, as death is a natural process, and all diseases are the result of natural causes, but to designate processes and conditions which sow the seeds of disease and death, or establish to train of symptoms which produce these causes of death.

The author then enumerated as pathological processes, the destruction of the hymen in coition, nausea of pregnancy, the disordered nutrition during gestation, the œdema of the limbs, the laceration of the cervix and perinæum, and the separation of the placenta from the uterine walls. In the vegetable kingdom, all annual plants die as a result of efforts at reproduction, and per-

ennial plants, long lived when sterile, become weak and succumb to the exhausting influence of reproduction.

In the animal kingdom, many varieties die soon after bringing forth offspring.

In women, quoting from Prof. Byford, the genital apparatus is in a constant state of predisposition to disease.

The author considered a pregnant woman as a patient to be kept under observation for a long time before and after delivery.

The text-books devote but little space to the immediate operation, but describe Emmet's operation at some length.

Dr. Pallen early called attention to the subject in 1866, by reports of cases, and again in 1874, also, Dr. Nelson, in 1877, had some successful cases.

Many cases pass unrecognized, owing to the soft condition of the parts, and the amount of blood covering them. To render diagnosis easier, one should note the nature of the hæmorrhage, which is arterial; sometimes a tear is detected as the head is passing through the os.

The reliable method adopted by careful examiners is to draw down the uterus with Vulsellum forceps, and expose to vision. The doctor then reported three cases as operated upon, two of which were highly successful, one being unsuccessful; and in conclusion, remarked that the injury could and should be recognized at the time of parturition, and that the importance of the operation cannot be overestimated, because—

1st. All operations for repair of injury should be done at the earliest possible moment, to secure repair by first intention, prevent deformity and prevent sepsis.

2d. The patient is saved all trouble and annoyance of preparatory treatment for a secondary operation.

3d. It gives the patient the best chance to escape septicæmia, subinvolution, and other complications which follow cervical laceration.

4th. It saves much time, great expense, and avoids deformity which would always remain unrepaired by plastic surgery.

The paper being before the society for discussion, Dr. Lyman expressed much interest in listening to its reading, but thought that experiment alone would decide the value of the

operation. He differed from the writer, in not considering pregnancy a pathological condition. Many women are ill at time of delivery, but the majority of cases present phenomena as natural as any in nature. If diseased, we should look for the cause, and consider it coincidental only; nausea, many hold, is only a normal condition of this state, protecting against miscarriage. In many cases, where an abnormal tendency to miscarriage existed, nausea should be induced, quoting Dr. Bedford. Artificial conditions produce accidental complications. Lacerations may often be left to nature. There is a remarkable tendency to recovery in lacerations of the perineum; one month after labor, on examination, one is astonished to note the great repair, without operative interference, although one had been tempted to operate.

Position and rest will go far toward promoting union. There are failures in many cases of operation. He considered the condition of patient at time of parturition very bad for operation, and that it was unwise, unless compelled, to add to the danger of septic poisoning. In rare cases only, after involution was completed, should the knife be used. Gentle topical treatment was preferable.

Dr. C. J. Lewis would not regard gestation as a pathological condition, but rather a hypertrophic one; he would not operate immediately after labor, for reason of adding surface to already large one for sepsis to occur. In wounds of the perineum would always apply deep, well adjusted sutures. The difficulty often found in obtaining consent of patient for a secondary operation would be an inducement to perform the immediate operation.

Dr. Bishop thought lacerations might be prevented by more careful finger dilatation.

Dr. Valin considered gestation a pathological process in the human female; in operation for laceration of the perineum had failed with silk sutures, but with the silver would be sanguine of success.

Dr. Lagorio had two cases of laceration of cervix after using forceps; thought many physicians are too prone to use forceps, doing much damage, and causing many lacerations; did not understand how union by first intention could occur on a surface in

a pathological condition. The operation was at all events a serious one—the patient being already fatigued.

Dr. Van Buren would demand facts to prove that gestation is a pathological condition in the majority of cases, though in the vegetable kingdom the fact might be true where the soil was sterile. He would hardly sit still and wait for nature to repair a laceration. There were some advantages in the immediate operation, *i. e.*, the relaxation of the uterus, allowing that organ to be drawn down and cleansed thoroughly; also in the conclusion of operation at one and same time with labor; its disadvantages seemed to be exhaustion and the lochia, unfavorable conditions to treat a wound; would be so considered in wounds elsewhere. Experiment was to be continued, and for this he waited.

Dr. Murdock, in closing the discussion, felt pleased with the thorough criticism of the members, but differed in a few points. Would not the torn surfaces be best protected from the lochia when well coapted? The careful operator will not operate on an exhausted woman. That the accoucheur of necessity has judgment, is pre-supposed. Probably not one case in twenty but what will bear the operation. Many are waiting for further light on the subject; from whence will it reach us, unless some one operates?

In every case of those now operating they report favorably, although many authorities are not now in favor of operation for repair of the perineum, while still favoring the operation upon the cervix.

So far as can be ascertained, success is the result in 65 per cent. of cases. Our main reason for operating is to prevent septicæmia. The operation originated in attempting to check arterial hæmorrhage.

Dr. Lyman moved that a vote of thanks of the society be tendered Dr. Murdock, and that an abstract of the paper be furnished for publication. Carried.

Dr. Angear, as chairman of the committee on rooms for the society, reported that the College of Physicians and Surgeons had offered accommodations, including cases in the college museum, for storage of pathological specimens, hence it seemed best to the committee to call the meeting at this place, to ascertain the

wishes of the society, and try the location, whether sufficiently central, etc.

Dr. Lyman moved that the society accept the offer of the college. Carried unanimously. Dr. Lyman also moved that the officers of the society interest the staff of the County Hospital in securing interesting specimens, reports of cases, etc. Carried. Dr. E. P. Murdock was unanimously elected curator of the society.

Among the members present were Drs. Angear, Bennett, Bishop, Bucher, Dobbin, Hanson, Lagorio, Lewis, Lyman, Leyon, Murdock, Newton, Patton, Sage, Tagert, Tebbetts, Valin ; also four visitors.

The society, on motion, adjourned.

J. H. TEBBETTS, *Secretary*.

ARTICLE X.

CHICAGO PATHOLOGICAL SOCIETY.

July 9. Regular meeting. The meeting was called to order by the President, Dr. Angear. The minutes were read and approved.

The following named gentlemen were elected to membership :

Drs. R. N. Hall, J. E. Harper, E. E. Holroyd and W. A. Synon.

In the unavoidable absence of Dr. E. P. Murdock, who was to have given the society a verbal report of an interesting case of infantile tetanus, Dr. Angear in a few words related what he knew of the case, having been called in consultation one hour before death occurred. The case occurred in a well-to-do family. A normal labor, without complications, was followed by no bad symptoms in the child till the sixth day, death supervening the evening of the seventh. The slightest current of air sufficed to throw the child into a most intense convulsion, extreme opisthotonos. The only lesion, of course, must have been the condition of the navel, and there was a peculiar redness around the umbilicus of an irregular shape.

The disease is coincident and probably excited by filth and foul air.

In London, over one hundred years ago, one out of six children died in the maternity hospitals within the first ten days with this peculiar disease.

About the same proportion of cases presented at Dublin at the same time. On sanitary improvements in these hospitals being introduced, the death rate fell from 2,000 to 500.

The Society then listened to the reading of a paper by Dr. Robinson, entitled "Myxœdema."

This rare and peculiar disease first began to be studied and differentiated in 1833 by Gall, but was then supposed to be a form of cretinism. In this country but five cases have been reported. Dr. Robinson then gave a detailed report of two interesting cases.

CASE I. Female, age 40; had several children; general health fair; face greatly and uniformly swollen with an eruption similar to that of arsenical poisoning; urine scanty, no albumen, no casts; speech slow, retarded; mental processes slow; no loss, but an impairment of coördination.

CASE II. Female, age 52, married; had several children, good general history; for eleven years has got easily frightened; mentally depressed by trifles, but not melancholic; rather lethargic, urticaria appears when stomach is disordered; throat dry, eyes swell, then face, then whole body simultaneously; perspiration absent, skin partially numb; taste impaired, also hearing and vision; menopause over; gait unsteady, but no ataxic symptoms; features have lost their play from the œdema, pupils normal; speech slow and hesitating; mental action slow; cheeks blush continually, eyelids pale and waxy.

The author then enumerated among the points of diagnosis that the cases reported have all been adult females; that the appearance of the face is like that in renal disease; the cheeks are usually flushed; the œdema is not that of dropsy—it appears simultaneously all over the body. The intellect becomes sluggish at an early stage; the voice monotonous; coördination tardy, but not lost.

Death occurs from coma uræmia, or inanition. The etiology is at present doubtful; perhaps a neurosis of the motor system,

together with disorder of the lymphatic system; according to some, an unrecognized albuminuria; or an accumulation of mucin in the connective tissue, deadening the action of the nerves.

Post-mortem changes do not reveal the cause of the disease. Degeneration of the anterior columns of the cord has been found. The arterial coats thickened; the stroma of the liver, spleen and kidney increased. The prognosis would be unfavorable. Renal affections are usually present in later stages. Little can be done way of treatment; he would advise milk diet, tonics and hygienic surroundings. Nitro-glycerine has been used to reduce capillary caliber.

Dr. Bennett remarked his interest in the reading of the paper, and inquired whether Bright's Disease could not co-exist, and was answered by Dr. Robinson that it could, and did, toward the close of life. The œdema does not pit on pressure nor extend by gravitation, as in Bright's disease.

Dr. Bennett then moved that the author be voted the thanks of the society and a copy of the papers furnished for publication. Carried.

Dr. Bennett then reported two interesting hospital cases, one of lumbago, severe, cured in two days by salicylate of soda, 30 gr. every two hours.

The second case, one of syphilis, which ran the whole course from initial lesion to secondary symptoms, iritis, meningitis, and death in six months.

Among the members present were Drs. Angear, Bennett, Brophy, Dobbin, Harper, Sanders, Robinson, Tebbetts, and several visitors. The society, on motion, adjourned.

J. H. TEBBETTS, *Secretary*.

A HOMŒOPATHIC physician at Vienna has left a large sum of money for the establishment of a homœopathic chair in the Vienna University, but the Austrian Government has declined to accept the money.

Original Translations.

ARTICLE XI.

D'ANTONA.—A CASE OF TOTAL PROLAPSE OF THE RECTUM TREATED BY A NEW OPERATIVE PROCESS.

The prolapse of the rectum was total in a woman seventy years old, was reduceable, but would come down again with an extrusion of 8 centm. The woman was tormented with an intestinal catarrh, and with ulcers here and there upon the mucous membrane, with grave protorrhagias and digestive disorders. Was impossible for her, the erect position; most painful, the walking and sitting.

D'Antona determined on operation, and after anæsthesia, fixed the tumor with four long Billroth's forceps to keep steady both cylinders of the prolapsus, one immovably against the other, and placed a catgut suture, "*a fil passante*," around all the prolapsed tube, $1\frac{1}{2}$ centm. distant from the anal margin. The sewing was double, making a first and a second turn of suture, "*a fil passante*," so that it resulted as if made in a shoemaker sewing manner, otherwise called "in a double row." The aim of this suture was the complete hæmostasia and the preventive reunion of the two ends of the intestine to be recised, in that manner occluding the space of Douglas and of the connective perirectals. Two pins were then fixed $\frac{1}{2}$ centm. anteriorly to the suture to well delimit the circle on which the chassaiqual ecraseur chain had to fall, which, when well tightened, permitted the withdrawal of the pins. When the recision of the prolapsed part was accomplished, the stump retracted powerfully inwards, and, notwithstanding every manœuvre, along with the traction on the four

ends of the catgut of the preventive suture, which hanged outside the anus, it became impossible to bring out the recised stump. Nor could it be done, as to dilate the stump with a large tent, which beforehand introduced in the rectum, ligated with a twine, was withdrawn. There was no loss of blood of any account, and another small cotton tent, soaked with a solution of perchloride of iron, was introduced. It clearly results that everything was foreseen in this operation, and every possible inconvenience avoided, for the preventive suture opposed the haemorrhage, the space of Douglas and the connective perirectal was occluded, and therefore the danger of an infection was avoided. The two stumps so remained tightly united and covered at their peritoral superficies anteriorly, and on the connective behind. Blunted pins with smooth edges were used to prevent the haemorrhage, and were introduced with the guide of the finger as to not involve some intestinal ause, which possibly might have fallen with the prolapsed part. Having made the usual dressing, the patient rested quietly, had no fever, nor suppuration, nor any inconvenience, was perfectly cured at the 15th day.

LADY DOCTORS WANTED IN CHINA.—Miss Howard, an American M.D., has for some time practiced her profession in China, where she was fortunate enough to be called to attend the mother of a highly important official, Li Hung Chang, and subsequently the wife also of the same distinguished per-onage. Her fame as a physician has, it is said, spread over all North China, and Miss Howard is now besieged with applications to attend the wives and female relations of wealthy natives, who are entirely averse to consulting a foreign male physician.—*Louisville Med. News.*

THE Cincinnati Board of Health consists of one quack doctor and five saloon-keepers. The health officer is ex-several occupations, so far as we are able to learn, in none successful.—*Lancet and Clinic.*

Domestic Correspondence.

ARTICLE XII.

GALVA, ILL., June 28, 1883.

EDITORS CHICAGO MEDICAL JOURNAL AND EXAMINER.

Dear Sir:—Several years ago I saw a suggestion in one of the medical journals that a spray of dilute soetic acid would dissolve pseudo membrane of croup.

I concluded that if it would do so, it would also dissolve the membranous deposit of diphtheria. Since then I have used it in a number of cases with the happiest results. Where the patient is old enough to permit a thorough spraying of the throat I have not failed to remove the deposit with two or three applications, sometimes with one. May 4, 1883, 4 P.M., was called to see young Mr B., aged sixteen. Face flushed; pulse quick; temperature 102; throat very painful, and deglutition very difficult. Upon examining his throat, I discovered a gray, gelatinous membrane fully one-eighth of an inch thick, covering the entire tonsil, and extending over the soft palate of left side; right inflamed and swollen, but no deposits upon it. I sprayed the throat with the following solution. Acid soetic concret, gtts xxx, aqua ℥i, and had the gratification of seeing the membrane entirely disappear. I put him on general treatment, stating that I would call in the morning. I then found the left tonsil and palate clear; but the right tonsil and palate had upon it a deposit fully as extensive as the left had upon it the night before. I again used the spray, and had the satisfaction of seeing the throat clear of deposit when I was through. I continued the general treatment, and left a solution acid soetic gtts x, aqua ℥i, to be used as a gargle. He

made a rapid recovery, and there was no more deposit of membrane. To those of your readers who have not used the acid in this way they will find it worthy of trial. I use a double-bulb rubber atomizer with rubber tip.

Yours very respectfully,

J. P. LYTLE, M.D.

ARTICLE XIII.

GARDNER, ILLINOIS, July 18, 1883.

EDITORS CHICAGO MEDICAL JOURNAL AND EXAMINER.

My Dear Sirs:—During the early part of last November a man came rushing into my office, nearly out of breath, telling me, "Come to my house as quick as possible, my boy is choking to death!" The place named was on'y three or four blocks away, and I lost no time in getting there; but death was there in advance. The mother and neighbors told me, "the child did not breathe after the father started." The boy was three years old, well developed, and was playing on the floor with other children, when, the play not going to suit, he began to cry, which brought on a paroxysm of coughing, then choking with results as stated.

The little fellow had had whooping-cough for some time, but was getting better. The history pointed to occlusion of the air passage as the cause of the sudden death, but as the child had nothing in its mouth at the time, I could not account for it, and was not a little exercised over the matter. The next day, having gained the consent of the parents, in the presence of the local fraternity, we made an examination, post-mortem, and found a chunk of fat pork in the trachea, immediately above the bifurcation. The mass completely filled the tube for the space of an inch and a half, and appeared as though it had been packed in there with considerable force.

The child died at five o'clock P. M. and had eaten nothing since dinner, about noon. The meat must have been swallowed at that time, and remained in the stomach until, during the fit

of coughing, it was forced up into the pharynx. The sucking inspiration, peculiar to pertussis, drew it down into the trachea, causing sudden death.

We occasionally hear of some one being "choked to death;" sometimes on meat, but after being safely landed in the stomach and remaining there for five hours, we would hardly look for it in the windpipe.

C. M. EASTON, M.D.

ARTICLE —.

QUINCY, ILLS., July 9, 1883.

DANIEL R. BROWER, M.D.

Dear Doctor:—Nearly a year ago I promised to write you an account of the results of the use of an anæsthetic mixture, used in a little operation for an exostosis upon the last phalanx of the great toe, where you kindly assisted me, you desiring to publish the account in the CHICAGO MEDICAL JOURNAL AND EXAMINER.

I should have written to you sooner, but wanted to report a sufficient number of administrations to give a reasonable idea of what might be expected from the use of the mixture.

I have now given it, or had it given fifty-seven times, with untoward results in but two cases, and in them every thing came out all right. Dr. C. B. Ellis, who has given it for me oftener than any one else, will explain why and how these symptoms appeared in his appended note.

Having lost a patient from the effects of chloroform several years since, I gave that up as an anæsthetic. Bromide of ethyl caused such intense redness of the face and such raving delirium that I gave that up. Ether was followed so often by vomiting, and the time for the full recovery of consciousness was so long that I was not satisfied with it. To obviate these defects, I believed a mixture might be made, that would unite the good qualities of chloroform with the safety of ether. I first made a mixture of chloroform one part, bromide ethyl one part, and alcohol four parts. This, I hoped, would act well, since chloroform made the patients taking it very pale, and the bromide of ethyl

made them very red. The alcohol was added as a diluent. In practice I found patients went under the influence in from one to four minutes, and came out in equally as short a time, but there was the deep flush and delirium, as when the bromide of ethyl alone was used.

The quantity of chloroform was increased until the mixture was: Bromide ethyl one part, chloroform three parts, alcohol four parts. When this mixture is administered the face retains its natural hue, the respirations and pulse are but slightly accelerated. There was but two of the fifty-seven patients who vomited; one of them, a very hysterical woman, very subject to vomiting, and the other had just eaten a hearty meal. I have given it nearly every time in a Dr. J. C. Hutchinson's (of Brooklyn) inhaler. Most of the patients did not require over two drachms to put them fully under its influence. Two ounces was as much as used in any operation, and that lasted for over an hour, and was an abdominal section for the removal of an extra-uterine foetus. The operations have been for amputations, tracheotomy, abdominal section, crushing a stone in the bladder, enucleation of the eye, castration and minor operations. The cases have been selected, not so much on account of the anæsthetic, but on account of the person that was to administer the anæsthetic. When I was afraid that the administrator would take more interest in the operation than the patient, I have kindly permitted him to use ether in preference to the mixture, which was on its trial. Hoping that others may test it and find it as efficient and safe as I have, I remain

Very truly yours,

WILLIAM A. BYRD.

ARTICLE XIV.

QUINCY, ILLS., July 9, 1883.

D. R. BROWER, M.D., Chicago.

Dear Doctor:—As I administered the anæsthetic mixture for Dr. W. A. Byrd in the two cases in which the “untoward results” supervened, I will explain how it came about. In both instances the operation was begun with a quantity of the mix-

ture which proved to be insufficient, and the attempt was made in the first case to keep up the anæsthetic influence with chloroform. As soon as the patient inhaled the chloroform, the pallor and interruption of the heart's action became suddenly so pronounced that the operation had to be continued without any further anæsthetic influence. This case was a castration on account of tubercular deposit, and the bad symptoms were not from shock, as the cord was not yet severed.

In the second case, which was an operation for a lacerated cervix, ether was used when the mixture gave out, and as soon as it was breathed carbonic narcosis was quickly observed and the inhaler was removed, and no further influence kept up.

In all other cases where I have administered the mixture, nothing unfavorable or unpleasant occurred, except the cases where vomiting occurred, as spoken of by Dr. B. The patients are readily brought under the influence of the mixture, and are as readily and pleasantly freed from it.

I would say that pure drugs have always been used in its preparation. Hoping that others may have as pleasant experience with the anæsthetic mixture, I am,

Yours respectfully, C. B. ELLIS.

IN reply to a letter from the editor of the *Medical News*, (Philadelphia), Dr. J. S. Billings, in charge of the library of the Surgeon-General's office, states that books are loaned from the library to other libraries which undertake to be responsible for them and have suitable buildings for their safe preservation.

Books which can readily be replaced, if lost, are also loaned to individuals upon their making a deposit with the librarian, of funds sufficient to make good any damage or loss.

Books must be sent by express, not by mail, and the cost of expressage paid by the borrower, the funds to be returned when the books are returned in good condition.

Reviews and Book Notices.

ARTICLE XV.—ON THE RELATIONS OF MICRO-ORGANISMS TO DISEASE. The Cartwright Lectures, 1883. By WILLIAM T. BELFIELD, M.D. Wm. Wood & Co. W. T. Keener.

As a topic for the Cartwright lectures, intended as they were to enlighten a large part of the profession on some recent advances, no more fitting theme could have been chosen than the one selected by Dr. Belfield.

There is no one question in the whole department of medicine of greater importance to all physicians, no matter what their practice, of more decided revolutionary influence upon our beliefs and notions than the one: how far does the germ theory extend?

Moreover, there is perhaps no subject as thoroughly misunderstood in this country as the topic of these lectures.

The manner in which Dr. Belfield solved the task imposed upon himself is highly creditable. After an introduction to his subject, he describes bacteria in general, and then fully explains how to search for them and cultivate them, exposing at the same time the errors into which different observers have fallen.

He then discusses the relation of bacteria to surgical infections, and the theory of antiseptic surgery.

The third lecture deals fully with tuberculosis, and the fourth with anthrax, protective vaccination in that disease, and further interesting generalities. Finally, an appendix sums up the diseases in which bacteria are found as constant elements, while another explains the technique for detecting them.

While these lectures can hardly introduce a student fully into our present knowledge of bacteria, they serve admirably to place

the topic in a lucid and comprehensive way before physicians partly acquainted with the details. When we reflect upon the amount of prejudice the germ theory encounters in this country, it seems proper, that the lecturer should have assumed a polemic, and even an aggressive tone. Although this style may not help to conciliate his opponents, it cannot be said that Dr. Belfield is unjust in his remarks. Sarcasm is one of the best weapons against ignorance, especially, when so well put as in these lectures.

A reviewer can of course find fault with any work. In this case it might be said, that some parts would have gained, especially the chapter on surgical infections, by a more systematic arrangement, with greater emphasis laid on the fact that the bacteria causing different diseases are different and distinct species.

Although this point is mentioned repeatedly, and indeed assumed throughout as an axiom, it is not insisted upon enough in the very places, where most confusion exists in the minds of the profession. For instance, it is yet urged against antiseptic surgery, even by a man like Lawson Tait, that bacteria are not known to cause putrefaction of the living tissues. This current misunderstanding shows, that even writers, who claim to be well informed, do not take into account sufficiently the difference in the action of different species of bacteria. Most pathogenic bacteria which can vegetate in the living tissues and injure them, do not cause putrefaction even in the dead soil, in which they may be cultivated. Again, the lecturer might have fortified his position better by referring more in detail to the recent positive demonstrations of the parasitic nature of erysipelas, gonorrhœa, trachoma, and suppurative inflammations in general.

Taking the book as a whole, however, it embodies so much of the recent research in this field, and presents it in such a fair critical light and such an attractive style, that it cannot be too strongly recommended to that large part of the profession who have not yet given the subject the proper recognition. H. G.

ARTICLE XVI.—DISEASES OF THE EAR IN CHILDREN. BY VON TOPVALTSCH, Würzburg.

This volume of 165 pages forms a portion of Gerhardt's *Handbuch der Kinderkrankheiten*; it treats in a very clear and thorough manner of—

- I. Diseases of the External Ear.
- II. Diseases of the Middle Ear, Tympanum, Eustachian Tube, and Mastoid.
- III. Foreign bodies in the Ear.
- IV. Diseases of the Inner Ear or Labyrinth.
- V. Deaf Mutism.

E. P. D.

AMERICAN DERMATOLOGICAL ASSOCIATION.

The Seventh Annual Meeting will be held at the Sagamore House, Green Island, Lake George, on Wednesday, Thursday, and Friday, August 29, 30, and 31. Papers will be read by the following gentlemen :

Dr. Piffard, Treatment of Acne; Dr. Hyde, A Study of the Coincidence of Syphilitic and Non-Syphilitic Affections of the Skin; Dr. Graham, General Exfoliative Dermatitis; Dr. Stelwagon, Impetigo Contagiosa; Dr. Robinson, Alopecia Areata; Dr. Duhring, 1. On the Value of a Lotion of Sulphide of Zinc in the Treatment of Lupus Erythematosus. 2. Report of a Case of Ainhum with Microscopic Examination; Dr. Atkinson, A Case of Multiple Cachectic Ulceration; Dr. Sherwell, 1. Pseudo-Psoriasis of the Palm. 2. Malignant Papillary Dermatitis; Dr. Bulkley, 1. A Hitherto Undescribed Vegetable Parasite found on the Human Skin. 2. A Clinical and Experimental Study on Pruritus; Dr. Van Harlingen, Experiments in the Use of Naphthol.

ARTHUR VAN HARLINGEN, M.D., Secretary.

DR. S. J. JONES has been out of town for a month, visiting Saratoga and the White Mountains in the East. He was in attendance upon the Ophthalmological Society.

PUBLICATION office of the JOURNAL has been removed to northwest corner State and Madison. The library of the Association is still at 188 South Clark street.

DR. J. N. HYDE will return to the city about September 1.

Selections.

CONCEALED INSANITY.—AS ILLUSTRATED BY CASE OF MARK GRAY*. By D. R. BROWER, M.D., Chicago, Ills., Professor of Nervous and Mental Diseases at the Women's Medical College, and Lecturer on Practice of Medicine at Rush Medical College (Spring Course).

Insanity is no moral agent—the disordered nutrition of the brain upon which it depends, does not in any way improve the ethical tone of the unfortunate victim. If the patient was inclined to lie or steal or dissimulate before his insanity, he is none the less so inclined after. That insane patients should, therefore, deceive those around them, by concealing their insanity when occasion seems to require it, is not inconsistent with such insanity. That they do it, is within the experience of all who have had much personal contact with them. The motives which prompt the insane to action are not necessarily different from those which influence the sane. A desire to escape from the confinement of a hospital for the insane, or to avoid the ridicule of those around, or to maintain control of their affairs, is the usual incentive to this concealment. Those who are successful have delusions that are not necessarily manifest in their daily life and conduct.

Instances of concealed insanity are numerous. Ingels† reports a case in which a systematized delusional lunatic concealed his delusions so well, that he was about to be discharged when an accident which excited his emotional nature and caused him to give vent to his delusions. In a second case, a man who was guilty

* Read before the Chicago Medical Society, December 18, 1882.

† *Annales et Bulletin de la Société de Médecine de Gaud.* August, 1868.

of very *bizarre* actions; was twice discharged, and twice recommitted in one asylum. On the third admission Dr. Ingles was able to determine, but only after a long conversation, that the patient's actions were from the first based on systematized delusions. But for an accidental emotional explosion, these delusions would not have been elicited. In a third case, a systematized delusional lunatic had delusions of persecution, but for several years had so conducted his business as to lead every one to regard him as of perfect mental integrity. To his mother he communicated his delusive ideas, and she accepted them as true, but ascribed his persecution to sorcery.

Meyer* reports a case in which a man was able to conceal his insanity from his friends, and this insanity was only detected on the explosion of a wild business scheme based on it. Spitzka† cites a case, in which a systematized delusional lunatic was so well able to conceal his insanity, that he was appointed guardian over his insane sister. Blanche‡ reports several cases, in which patients concealed their insanity to avoid being douched and subjected to restraint by Leuret, who attempted to treat insanity by intimidation.

Munro§ had a curious experience of this kind. A patient brought action against him for false imprisonment, and underwent a severe cross-examination without revealing any delusion. It was suggested to the judge (Mansfield) to ask him what had become of the princess with whom he corresponded in cherry juice, and immediately a group of delusions became manifest. The patient indicted Dr. Munro a second time, but could not be led to say a single word on the subject which had led to the failure of his first indictment. Blanchford|| says, that patients may deny their delusions for the purpose of regaining liberty. Forbes Winslow¶ states, that Lord Ellenborough expressed in the course of a judicial enquiry his opinion, that a patient had perfectly recovered. The patient was detected speaking in Latin in order to conceal his delusion. Bucknell and Tuke** cite a

* *Allgemeine Zeitschrift fuer Psychiatrie*. Band xxiii.

† *American Journal of Neurology and Psychiatry*. August, 1832.

‡ *Del état actuel des aliénés traité par Leuret*.

§ Cited by Bucknill and Tuke, *Psychological Medicine*, p. 477.

|| *Insanity and its Treatment*, page 361.

¶ *Obscure Diseases of the Brain and Mind*.

** *Op cit.*

case in which a patient was able to conceal his delusion in conversation, but revealed it in his correspondence. Hammond* states, that the insane may conceal their delusions for a purpose.

†Haslam states concerning the insane that "they have sometimes such a high degree of control over their minds, that when they have any particular purpose to carry they will affect to renounce their opinions which shall have been judged inconsistent, and it is well known they have often dissembled their resentment until a favorable opportunity has occurred of gratifying their revenge. Of this restraint, which madmen have sometimes the power of imposing on their opinions, the remark has been so frequent, that those who are immediately about their persons have termed it in their rude phrase, stifling their disorder." ‡Esquirol‡ makes very similar statements. On the other hand, Dr. A. E. Macdonald § states, that men really insane do not recognize their insanity, and hence do not conceal it. He is, however, the only physician who has had that experience.

Chicago has had recently two striking illustrations of the same kind in the case of Adelaide Roberts, who shot Theo. Weber; she was declared to be insane, was sent to Elgin Hospital, and about two years thereafter released by Judge Rogers under an *habeas corpus* proceeding, and in the case of Mark Gray, the would-be assassin of Edwin Booth, who was declared to be insane, and about two years after was released by Judge Williams, of Quincy, under a similar proceeding.

These learned judges by a stroke of the pen cured these two cases of insanity, after the accomplished superintendent of the Elgin Hospital for the Insane had expended his resources in that direction for two years in vain. Such presumption is marvelous. Had I taken before either of these judges a case of phthisis, and asked him to relieve the patient by the same process, it would have created a doubt, as to my mental soundness, yet insanity is not less a disease than phthisis. The judges would soon recog-

* Treatise on Insanity.

† Observation on Madness, p. 53.

‡ Maladies Mentales.

§ American Journal of Neurology and Psychiatry. Volume I, p. 120.

nize in a most decided manner the exclusive medical relations of insanity should one of their own family become insane. The judgment of Dr. Kilbourne would then be accepted without question. Neither of them would under such circumstances think for one moment, of calling even upon the most exalted judicial officer for assistance or relief. The case of Adelaide Roberts may on some future occasion be made the basis of some reflections on the medico-legal relations of hysteria and hystero-epilepsy.

At present I ask attention to the case of Mark Gray: May 10, 1879, at an inquest and judgment of the Criminal Court of Cook County, Illinois, Mark Gray was adjudged insane, and committed to the Elgin Hospital for the Insane, into the charge of the superintendent, who was commanded to take the body of the said Mark Gray, and keep it in safety in said asylum until he should have fully and permanently recovered from such insanity. The offense which resulted in this judgment, was an attempt to shoot Edwin Booth, the distinguished tragedian, in McVicker's Theater, Chicago. Mark Gray fired two shots from the dress-circle, and was in the act of firing a third, when he was seized and immediately placed in the custody of the police.

For a day or two after the event he was morose and reticent. He would answer questions, if at all, only in monosyllables. Afterward he became more communicative, and boasted of his wonderful histrionic talent, especially his proficiency in Hamlet, of which he claimed to know every line, and of his ability to render it in a manner much superior to Edwin Booth. His great extravagance in this direction, his excitability, his reticence about the tragedy, the seeming lack of motive for the crime, the fact that Booth had never seen him, led to doubt as to his mental soundness. After a day or two he manifested the delusion which impelled him to the crime. This was the belief that he was the son of Edwin Booth, and as such, had by heredity his wonderful histrionic talent. Edwin Booth had abandoned him in his childhood, had deprived him of a suitable education for the development of these talents, had neglected his mother, and in revenge for this, Gray shot at him twice, and would have continued firing had he not been arrested. It was at first the opinion of some

that there might be a foundation for this belief, notwithstanding its denial by Edwin Booth. Those who entertained this opinion abandoned it when Mrs. Gray made her appearance, a glimpse of her was sufficient to satisfy the most skeptical, more especially as Gray was found to be twenty-eight years old, and it was shown that Mr. Booth had been absent traveling in Australia and elsewhere abroad for two years prior to Gray's birth.

On examination of Gray, three days after the shooting, I found him to be tall and slender, with small muscular development. His face was asymmetrical, the muscles of left side differently innervated from those of the right, so that a smile caused quite a marked distortion of the face. There was twitching of the muscles of the right side of the face. The muscles of the right arm and leg were more active than those of the left. He dragged his left foot in walking and kept the right in more or less activity when talking. His pulse was one hundred and ten and feeble. He complained of headache which had continued for months, and of sleeplessness. His tongue was covered with a heavy white fur and was tremulous.

It was established at the trial in the Criminal Court, that Mark Gray's father died of ascites, four months after Mark's conception, which ascites was probably the result of hepatic cirrhosis, seemingly a consequence of spirit drinking. This is an interesting and important fact in the record. His father was laboring under an incurable disease of nutrition at the time of his conception. The other children of the family have shown none of Mark's peculiarities. It illustrates the important bearing upon the health and welfare of the offspring. I recall a case in which the father had been unfortunate in business, left the city, drank heavily, returned home after some days, not yet over his spree, a child was conceived, and it is to-day the inmate of an hospital for the insane, incurably insane. There are four other children in the family, three older and one younger than this patient; all men and women of robust mental and physical health. The spree above mentioned is the only one in which the father ever indulged.

The broken down health of Mark Gray's father at the time of

his conception, laid the foundation of a weak nervous organization, which was the first step in the origin of Mark's insanity. Another interesting feature of the case is that Mark's age at the time of the full development of the insanity was about the same as the age of his father, at the time of his death. The disturbance of nutrition, which by attacking abdominal organs gave rise to dropsy in the father, by attacking the brain gave rise to insanity in the son, and this transfer of morbid action from one organ in the parent to another in the progeny is a fact of common observation. Had the same organs been the seat of disease in the son as in the father, the criminal trial never would have taken place, and the stupidity of the Quincy judge would not have manifested itself in this direction.

Mark Gray grew up possessed of inordinate conceit and exalted self feeling and having ideas of grandeur and importance. In early life he became intemperate, a part of the time he drank heavily. In 1876 he stopped drinking excessively, and began to act strangely about his home. He would get up at night and declaim Shakespeare the night through, He would keep himself away from the other members of the family, and would sit for hours with his head between his hands. At other times he would strike "stage attitudes" and remain for a long time in these. So peculiar was his conduct, that his mother and sister were much alarmed about him. It was at this time that he conceived the delusion of his relationship to Edwin Booth. He told me that he heard it frequently whispered as he passed along the street, "there goes the bastard son of Booth." His fellow-clerks in the store tormented him by the same sort of whispering. These were evidently auditory hallucinations.

After a time he determined to have an interview with Mr. Booth, and demand a monetary compensation for the years of imaginary neglect which he had sustained. For this purpose he came to Chicago, April 22, 1879, and went immediately to the theatre to see Mr. Booth, but did not find him there. He went to the theatre again that night. Mr. Booth was playing *Riche-lieu*. During this play Gray imagined that Mr. Booth saw him sitting in the gallery and recognized him; made faces at him, called him by name several times, "Mark! Mark!" and made

fun of his mother. Gray left the theatre with the resolution to kill Booth, for these insults, the next night. He purchased a pistol the following day, and afterwards secured the seat which he thought would serve his purpose best, in the dress-circle near the stage, and by a study of the play, selected the prison scene as a favorable time for firing the shots. He was arrested, tried, and found to be insane as already stated.

At the Elgin Hospital for the Insane, his delusion of his relationship to Booth, his delusion of his wonderful histrionic talent, and his constant reading and declaiming Shakespeare were manifest. December 15, 1879, he importuned Dr. Kilbourne for his discharge, as he had often done before. Dr. Kilbourne told him that he was still insane and, as a proof of it, stated that his (Gray's) delusion of being Edwin Booth's son was just as fixed as the day he entered the hospital. The day after this the hospital record shows that Gray gave up reading and declaiming Shakespeare, and when spoken to about being the son of Booth, would say that he had given up all idea of such a relationship, that it was a crazy notion of which he had rid himself. He continued then to assert on all occasions, that his delusions had been corrected, and he manifested no interest in Shakespeare or theatrical matters, until December 1, 1880.

During this interval of nearly one year, the Board of Trustees had Mark before them three or four times, carefully examined into his mental state, and thought he might be discharged, but Dr. Kilbourne, not being quite satisfied, asked them to wait a short time longer. December 1, 1880, Gray broke out afresh, and the hospital notes show "that he refuses to have his hair cut, likes to wear it long, as it looks more stage-like, practises elocution every day in his room, considers himself a great Shakesperian scholar, has talent for the stage much superior to that of his father Booth." He continued thus to manifest his delusions, every day. Thus, on October 18, 1881, in conversation with Dr. Crane, assistant physician of the Hospital, Gray said that Mark Lyon (Gray's father) was Edwin Booth; that his father's brother, Pat Lyon, was Junius Brutus Booth, Jr.; another brother of his father was John Wilkes Booth, and still another, Bryan Lyon, was Joseph Murphy the comedian, whom he believes is a brother

of the Booth's. He does not believe that Wilkes Booth is dead. He believes his cousin Mary Lyon, is a daughter of Junius Brutus Booth.

February 5, 1882, he had an interview with the Board of Trustees seeking a release from the hospital. In that interview he was again told that so long as he had the delusions concerning Booth and the stage, he could not be discharged. During this interview he was much excited, violent at times, and incoherent in language. He left the room evidently resolved on concealment again, for he ceased from that time to manifest any interest in theatrical matters, and laughed at his delusion concerning Booth, so that his attendant, who was employed shortly after this event, and who was quite constantly with him for about eight months, saw at no time any evidence of mental disturbances, but noticed Gray avoided with much effort and with a surprising degree of indifference any reference to theatrical matters.

The *habeas corpus* trial occurred in Quincy. Why in Quincy, two hundred miles from the place of the criminal trial, is a mystery! The trial was conducted as such trials usually are. A dozen people were called by Mark's attorney. Some had known him before; then talked to him for a few minutes about the weather, business, politics, theatres, etc., and all with one accord testified, that they had found no evidence of insanity about him. This purely negative evidence would release from custody nine-tenths of the patients of any hospital for the insane. Four persons who were announced as physicians were called by Gray's attorney. One, a veterinary surgeon, who felt quite confident of Gray's complete restoration. One, a retired clergyman, who had attended one course of lectures in a medical school, who, to his credit be it said, testified that if the patient had deceived the hospital authorities as to his insanity for one year, it is quite probable that he might be doing it now, and he would hesitate therefore in aiding Gray's discharge. One was a young M.D., son of the retired clergyman, before mentioned, fresh from a medical college, who will probably be wiser when he is older, and the fourth was a physician of fine attainments, with that familiarity with insanity which the country practitioner has. He testified that while he saw no evidence of insanity in Gray, yet he would

not advise his discharge against the judgment of Dr. Kilbourne. In addition, an attendant who came to the hospital about one month after Mark began to conceal his delusions, the last time, testified, that he had daily intercourse with him and had observed no evidence of insanity, but was surprised at the pertinacity with which he avoided all conversation upon theatrical matters, the attendant being much interested in such things.

Mark testified in his own behalf, and his testimony was a surprise to the newspaper reporters and the people about the court room. The average individual looks upon insanity as a complete loss of reasoning powers, as something which must be violent and striking in its demonstrations. I have repeatedly taken visitors through the Insane Hospital of which I was the superintendent, and when every ward had been visited have them ask me to show them the lunatics. To one familiar with insanity, and the history of this case, Mark's own testimony was sufficient to show that the disease was not eradicated. He indulged in that denunciation of the Hospital authorities, which is usual in such cases. He pronounced judgment on the assistant physician, Dr. Crane, now in private practice in New York, to the effect that *he* was crazy, "*crazier than witness was.*" Dr. Kilbourne, one of the most successful superintendents in the West, a thoroughly scientific physician, was to him vile and despicable. He accused Dr. Kilbourne of taunting him with the story of his birth; of abusing him so maliciously and acting in his visits to him so like a crazy man, that after he went out the attendant told him he ought to have knocked Dr. Kilbourne down. I have often, as has every superintendent of an insane hospital, heard precisely such abuse from this class of patients. It is a remarkable fact, that patients who leave the hospital cured, always have pleasant recollections of those who cared for them in their affliction. This unwarranted abuse of Drs. Kilbourne and Crane would be sufficient to establish Gray's insanity were there no other evidences of it. Gray told the story of his life and of the great tragedy he tried to enact, with a smile on his lips and with many efforts at jocularity; when these jokes provoked laughter in the hangers-on of the court, Gray seemed particularly happy. He told with evident delight of the way he had fooled all the asylum au-

thorities for one year ; that Dr. Kilbourne had told him he could not be discharged until he had given up his delusions ; that he then resolved to conceal them ; that he was successful in deceiving his ward attendant, Dr. Crane, and the Board of Trustees, and after playing the game, as he expressed it, for a year, he gave it up. The learned judge, at this part of Mark's testimony, asked him : " If you admit that you did practice this deception for one year, how shall I know that you are not doing it now ? " Mark, after a long hesitation, answered : " I don't know," and in a very tragic attitude, rising from his chair, appealed to God to witness that he was not fooling now. On behalf of the hospital, Mr. J. S. Miller, the attorney, first presented the record of Mark's hospital life ; an abstract taken from the daily reports of his various attendants, showing the presence of his delusions ; the concealment of them for one year ; the subsequent reappearance of them in the same form, and the concealment beginning in February, 1882. Dr. Kilbourne testified to the same effect, and stated in strong and positive language his belief that Mark Gray was still insane. Dr. W. A. Byrd, one of the leading surgeons of Quincy, after hearing all the testimony, and after a careful personal study of Gray, testified that he was then insane. Dr. Byrd dwelt upon the evidence of neurosis, as shown in asymmetry of the face, in unequal action of the muscles of the two sides, in the twitching of the facial muscles, and those of the shoulder and hand.

My testimony, and that of Mr. Rice, a deputy sheriff of Cook Co., who had taken Mark to the hospital, and had frequently seen him there and knew of his concealed delusion, was to the same effect. Judge Williams then rendered his opinion, releasing Gray from restraint.

Of course there could be no doubt that the relator was insane, if there had been any doubt, his subsequent history placed it beyond question. He wrote a letter four weeks ago to Mr. John W. Norton, of the Grand Opera House, St. Louis, in which he proposed to star Hamlet in small towns ; still later to the Keokuk correspondent of the Chicago *Tribune* he said : " It is my intention to make arrangements to star with a company on the road. The notoriety I have achieved during the last few years

and my great resemblance to Booth would draw crowded houses. I resemble Mr. Booth in every particular except the eyes; his are deeply sympathetic, mine the most brilliant. Of course my going on the stage will hurt Booth," and much more talk of the same character. The resemblance to Mr. Booth is an insane fancy.

This case suggests the necessity of taking this matter of discharging criminal lunatics out of the power of the judiciary. It should be placed in the hands of those who have given some personal attention and study to insanity; those who recognize the fact that insanity can be concealed, and the further important fact that the homicidal impulse may lie dormant for years, and then manifest itself in its former fury. Hadfield, whose case is quoted in every book on medical jurisprudence, who was released by the eloquence of Erskine, from the responsibility for his act of firing at George III., in Drury Lane Theatre, remained in the Bethlehem Hospital for the Insane for years before he showed any other homicidal impulse, and then he made a murderous assault upon a keeper for whom he had always manifested the greatest regard. In Illinois, this important matter could with safety be confided to the State Board of Public Charities.

[NOTE.—I am very much indebted to Dr. Jas. G. Kiernan for citations of authorities found in this paper.]—*Alienist and Neurologist*.

ON THE TREATMENT OF NEURALGIA. A Clinical Lecture by
PROF. DUJARDIN-BEAUMETZ, Member of the Academy of Medicine, Physician to the Hopital St. Antoine, etc., Paris, France.

In speaking of the etiology and treatment of neuralgia, Prof. Dujardin-Beaumetz speaks of this disease as being the result of modifications affecting the integrity of the nervous system, central or peripheral, or of the blood, or finally of the circulation. Here, then, are three classes of causes which we must pass in review.

From the standpoint of the nervous system, leaving one side alterations, more or less profound, and compressions of the nerves, I desire to call your attention to two points: first, the predisposition to neuralgias in the neuropathic and hysterical; second, to inflammation of the nerve-tubes or neuritis.

Neuralgia is one of the manifestations of the nervous temperament, and it may be affirmed that every nervous person suffers more or less from it. In these cases we witness the triumph of the bromides and of hydrotherapy. Bromide of potassium (alone or associated with other bromides), cold douches, local or general, and suitable out-door exercise are the most certain methods of cure of neuralgias due to neuropathy; electricity, and especially static electricity, is a useful adjunct.

Neuritis is one of the causes of obstinate neuralgias; it entails atrophy of the member, and trophic cutaneous disturbances. The most effective remedy for neuritis is revulsion, which has a favorable influence on both pain and inflammation. Here all the revulsive methods before alluded to are applicable, and especially active cauterizations. To counteract the trophic troubles, you should have recourse to galvanism.

Neuralgias due to circulatory modifications are of two kinds—congestive and anæmic. Congestive neuralgias are especially frequent in the arthritic, and are best treated by ergot and aconitia. It is especially in facial neuralgias of plethoric persons, with marked congestion of the face, that aconitia is effective, and this by a sort of double influence on the circulation and on sensory innervation. Marino* has recently proposed ergotine for these congestive neuralgias, basing his recommendation on the known effects of this drug in constricting the minute vessels and anæmiating the tissues. I have never used this drug in neuralgia, having almost always found in aconitia a heroic and certain remedy. In neuralgias from cerebral anæmia, morphia is *par excellence* the medicament. It removes pain and provokes a salutary congestion of the sensory nerve-centers, which directly antagonizes the cause of the pain. Gymnastic exercises and hydrotherapy are most excellent adjuvants in these cases.

* Marino, Ergotina perfruse Epidermico, nelle cure delle Neuralgia, Palermo, 1877.

As for the alterations of the blood, which are the point of departure of dyscrasic neuralgias, they are very numerous, and chlorosis deserves the first mention. It may be affirmed that every chlorotic girl is neuralgic, and here we have an illustration of that grand principle of Hippocrates, *sanguis moderator nervorum*. Therefore, every therapeutic means which shall augment the richness of the blood, and the proportion of its hæmoglobin, is applicable to these cases; ferruginous or arsenical medication, baths of compressed air, inhalations of oxygen, country air and exercise, hydrotherapy, gymnastics, nourishing food, all these remedial measures are indicated. I cannot too strongly urge the use of arsenic in these cases of chlorosis; in my experience, the arsenical treatment has been quite as successful as the ferruginous, if not even more so; for arsenic acts, not only as a reconstituent, but it is a direct modifier of nerve substance. Those who have had the most practical acquaintance with the use of arsenic in neuralgia are the most emphatic in its praise.

This medicament may be given in the form of Fowler's solution; dose, three to ten drops after meals. [Anstie prefers this form of administration; he finds arsenic especially useful in neurroses of the parvagum.] It is also given in granules and in pill form. [The combination with quinine, ext. aconite, and strychnine of Dr. Gross, known as Gross's neuralgic pill, is a favorite one in the United States.]*

Certain neuralgias are of malarial origin; here we witness the triumph of sulphate of quinine. Marrotte has given us a good description of these febrile neuralgias, due to marsh poison. Where there is any reason to suspect any pathogenetic influence of this kind, you should be particular to ascertain whether the neuralgic attack comes on at a fixed hour, in which event you can easily and speedily control the affection by a full dose of quinine. You can increase the effect of the quinine by combining it with aconite, giving every three hours a capsule or wafer containing one-quarter of a milligramme of crystallized nitrate of aconitia, and twenty-five centigrammes of quinine; four of these may be given each day.

*Vide Cohen on "Arsenical Treatment of Neuralgia" in *Journ. Med. de Bruxelles*, 1864. Barrilla, in do., for 1863. Vanlair, *The Neuralgie, their Forms and Treatment*, etc., 1882.

The diatheses, and in particular, syphilis, arthritism, dartre, have often a marked etiological relation to neuralgia. As for the first, you must not confound the so-called "osteoscopic pains" with the neuralgic pains, which really often exist under the influence of syphilis. These cases demand the ordinary anti-syphilitic treatment.

As for neuralgias of arthritic origin, they are among the most frequent, and sciatica and gout are often one and the same thing. The means which succeed the best in the treatment of gouty and rheumatic neuralgias are baths, and in particular, sulphur baths and vapor baths; the latter are often medicated to advantage with turpentine or pine shavings. In rheumatic neuralgias, the thermal waters are often successful; those of Plombières, Bourbonne, and especially Aix-les-Bains. In these neuralgias we may employ cyanide of zinc, proposed by Luton, and especially salicylate of sodium.

The dartrous neuralgias are readily amenable to the arsenical treatment.*

Such is a somewhat curt summary of the principal indications of the pathogenetic treatment of neuralgia. I must now briefly consider the therapeutics of certain forms of neuralgia, and for convenience of arrangement will begin with the foot and end with the head.

Plantar neuralgia is one of the most painful of neuralgias, and incapacitates the sufferer from walking or standing. It is especially gouty and rheumatic patients that are affected in this way. This neuralgia is often rebellious, lasting months, and even years. You have seen a good example in our wards; I allude to a certain female who, in consequence of rheumatism following an accouchement, has been for six months confined to her bed from plantar neuralgia. What has seemed to succeed best in her case has been the application of strong tincture of iodine, and hot sulphur foot-baths.

I shall not dwell long on sciatic neuralgia, which has been

* Marrotte. "Febri-neuralgiés de l'esthime du Gosier," *Bull. Gen. de Therap.*, 1874. Abbot "Sciatic and Facial Neuralgia Treated by Salicylic Acid and Salicylate of Sodium," *Boston Med and Surg. Journ.*, July, 1879. E. Labbé, "Neuralgiés traités par le Salicylate de Soude," *Soc. de Therap.*, Paris, Feb. 9, 1881. Lagrelette, "De la Sclatque," *Th. de Paris*, 1869. This writer advocates strongly vapor baths and hydrotherapy in sciatica.

often taken as the type of neuralgia. Here the revulsive medication, carried out in all its rigor, succeeds best. Sciatica is often a neuritis, and it may almost with certainty be affirmed, when this neuralgia is obstinate, and is not due to compression of blood-vessels, viscera, etc., that it proceeds from inflammation of the nerve. I believe that this frequency of neuritis of the sciatic nerve results from proximity of that nerve to the surface, and from the modifications which it is likely to experience from external influences, and especially from atmospheric changes; there is certainly no form of rheumatic neuralgia so common.

Apropos of these stubborn sciatic neuralgias, I must remark that they are often dependent on affections of the spine, especially when they are bilateral. Essential double sciaticas are very rare, and when they occur are generally occasioned by *tabes dorsalis*, or, as Worms has shown, by diabetes.*

Neuralgia of the uterus, bladder, testicle, and spermatic cord have frequently been observed. I know that it has been disputed whether these *visceralgias* ought to be considered true neuralgias, but it is of little consequence what we call them, they are painful affections, and prompt relief is demanded. In uterine neuralgia, cauterizations are of striking utility. You will, in fact, observe a certain number of females, who, apart from all organic disease of the uterus, suffer pains in that organ presenting all the distinctive characters of neuralgia. In these cases revulsive applications to the os or cervix with the Paquelin cautery, or the acid nitrate of mercury, give excellent results. Do not, however, forget that in this neuralgia of the organs contained in the pelvis, one of the best methods of administering anodynes is the suppository. [Here the morphia suppository of the U. S. P., with one-third grain extract of belladonna, will do good service.]

Ileo-lumbar neuralgia is often the cause of cruel suffering, besides being rebellious to the most energetic treatment. In fact, this affection is frequently due to profound troubles of the kidney, and particularly to renal lithiasis. You are aware that in these renal cases of persistent neuralgia it has been proposed to remove, or to open, the kidney; in a word, to perform nephrectomy or nephrotomy, as Professors Leon Le Fort and Le

* Worms, *Symmetrical Sciaticas in Diabetes*, Paris, 1880.

Dentu have done. I pass by gastralgia, hepatalgia, and the greater part of abdominal neuralgias, only referring you to what I have already said in regard to them while treating of diseases of the stomach, liver, and intestines, and I come now to intercostal neuralgia. This is a very common neuralgia, and all delicate, nervous women suffer from it more or less. Peter, in his remarkable lessons on *pains in the side*, insists that intercostal neuralgia is always limited to the left side; I do not quite agree with him in this. It is true that the far greater part of painful intercostal affections are on the left side. You will nevertheless now and then see hysterical patients whose painful sensations and whose anæsthesia are exclusively right-sided. On whichever side it may occur, this neuralgia is obstinate, and resists not only morphine injections, but also revulsive treatment. Hydrotherapy, applied in the form of douches to the painful region, seems to me one of the best means of combating this rebellious intercostal neuralgia.

I shall finish this lecture by a brief consideration of the neuralgias of the fifth nerve.

Odontalgia, I need not tell you, is one of the most common of painful affections, and every one has at some time experienced the atrocious pain of toothache. This neuralgia is often determined by alveo-periostitis, or by a carious tooth, which affects the terminal portion of the dental nerve. There exists a ready means of relief for this pain in arsenious acid, which destroys the dental pulp, a method which Tomes, Magitot, and Combe have advised. A paste is recommended (to be applied on cotton to the cavity of the tooth), consisting of two parts of white arsenic, two of morphia, one of gum tragacanth, and one of glycerine. Among the numerous measures which have been employed against odontalgia, Bouchaud has counselled electricity. His method is to place the positive pole over the diseased nerve, and the negative pole a short distance from it, and to pass a mild continued current.

A word now about facial neuralgia, properly so-called. These neuralgias affect sometimes the supra-orbital nerve, sometimes the infra-orbital branches; these last are the most obstinate. As I have already told you, they often yield readily to treatment by

aconitina, or to sulphate of quinine when of an intermittent character. They sometimes defy all treatment, and have been known to involve the facial nerve, as well as the fifth. Without discussing the question of recurrent neuralgia—a subject which has of late been treated in a brilliant manner by Cartaz—you all know that neuralgia is often accompanied by painful contractions, and that to this syndrome the name has been applied of epileptiform neuralgia, or *tic douloureux* of the face. It is the most atrociously painful affection that has ever afflicted humanity, and instances have been known where it has driven its unhappy victim to suicide.

It is in these cases that surgery steps in, with its nerve-stretching and neurectomy; here, too, the advantages of galvanism have been lauded. If you employ electricity you must never exceed a certain intensity (two or three milliamperes, for instance); you must also, as Apostoli enjoins, make use of rheostats, and interpose a certain resistance to the current, to avoid the *photopsias* which are produced with each modification of the current. It is understood that the positive pole must be placed over the painful point, and as for the duration of the *séance*, it ought to be continued till the pain disappears.

I must, before finishing, say something about migraine, which (therapeutically, at least) belongs to the neuralgias. You are not ignorant of the discussions which have arisen over the pathogeny of migraine, some considering it simply a neuralgia of the tri-facial, others as a special neurosis of the same nerve, or even as a neuralgia of the brain itself, a cerebralgia, as Romberg maintains. There are still others who assert, as does Du Bois-Reymond, that the principal seat of migraine is the cervical portion of the great sympathetic. This is the view generally held in France, especially by Gubler and Jaccoud. It is, in fact, probable that migraine is not a simple neuralgia, but a complex neurosis, affecting alike the cerebrum, the trigeminal nerve, and the cervical portion of the sympathetic.*

Whatever its pathological nature, migraine is a very distress-

*Tissot, *Nerves and their Diseases*, t. xi, Paris, 1873. Bouillaud, *Nosographie Médicale*. Pelletan, *Coup. d'œil sur la Migraine et sur ses divers traitements*. Du Bois-Reymond, *Archiv. fur Anat.*, 4th livra'son, 1860, p. 461. Gubler, *Dict. des Sc. Méd.*, Art "Migraine." Piorry, *Memoire sur la Migraine, Traite, Med. Pratique*, t. viii, p. 73.

ing affection, and you will often be consulted in reference to it. You ought always, if possible, to ascertain the first cause, and as far as this is concerned, this is what you will discover: in nine cases out of ten migraine is a diathetic affection, and for my part I have frequently observed it in hæmorrhoidal, arthritic, and asthmatic subjects. Your treatment then should be directed to the arthritic diathesis, of which the migraine is an expression. At other times you will find the migraine due to causes of a different character, occasional causes to which you should address your therapeutic endeavors. These causes may be ranged in three groups; first, excess of work, and especially brain work during the night-time, and with the aid of too strong a light. Piorry referred all migraines to fatigue of the the eyes; to him migraine was only a manifestation of irisaigia. Second, anæmia; the megrim of chlorotics is an example, coming on whenever by any cause the organism is enfeebled. Third, congestive head-troubles, instances of which we see in the hemicranias of the gouty or arthritic.

The first class of patients are benefited by rest from mental toil, and by bromide of potassium; the second may require hydrotherapy and morphia; the third will need alkalies, intestinal derivatives, and especially aconitia.

I have finished this long exposition of the treatment of neuralgia—exposition far from complete, notwithstanding its length. I believe, however, that I have furnished you the general principles which ought to guide you in your practice.

In the combat with pain your therapeutic resources will be taxed to the uttermost, and you can only fulfil your professional duty by the intelligent endeavor *always to relieve, if you cannot cure.*—*Medical News.*

CLINICAL LECTURE ON THE AFTER-TREATMENT OF PUERPERAL WOMEN. Delivered at the Philadelphia Hospital by JOHN M. KEATING, M.D., Visiting Obstetrician to the Hospital.

Reported by W. A. EDWARDS, M.D.

GENTLEMEN.—Last week a woman entered the hospital, a few days after her confinement, in an apparently healthy condition.

In forty-eight hours, however, local cellulitis had developed, with excessive pain on pressure, tympany, and a rapid rise of temperature. In other words, puerperal fever had set in, supposed to be due to the absorption of infectious material from the uterine surface, the patient having suffered an acute laceration of the cervix in the confinement. This rapid rise of temperature, the attack setting in so soon after labor, and, withal, the onset being so sudden, with obstinate vomiting, pain, tympanitic distention of intestines, interference with respiration, and the rapid sequence of symptoms which all foreshadowed a fatal result, made her condition indeed difficult to treat. It is here, in a case like the present, that I would most strongly advocate antisepsis and even intra-uterine injections.

Dr. T. Gaillard Thomas presents an article in the *New York Medical Journal* for March 31, 1883, recommending these intra-uterine injections in puerperal septicæmia. His cases are certainly extraordinary, and if they did not come from such authority I should be inclined to doubt the accuracy of the observation. One case was delivered in a perfectly normal manner, without difficulty or assistance. The temperature at the end of the fourth day had risen to 106.5° , and the patient presented all the appearance of puerperal poisoning. There was extensive bilateral laceration of the cervix. The uterus was then washed out with carbolized water every four hours, and the temperature at once fell to 101° ; ten grains of quinine were given every eight hours, enough being administered to negative the idea of the high temperature being due to malaria. As soon as the temperature regained 105° , the washings were again ordered and the temperature was reduced in like manner.

Dr. Thomas also remarks that the time has arrived when we should treat puerperal septicæmia upon just as simple a plan as septicæmia of any other kind, by washing the surface where the disease originates with some antiseptic fluid. I desire to lay particular stress upon the temperature record in cases of this nature; it is the guide-post to prognosis. The fatality of an epidemic or of an individual case is in proportion to the excessive temperature. It is a fact that prolonged high temperature will

undoubtedly kill; this is seen in no other disease more decidedly than in the one under consideration.

During my term in this house, some ten years ago, our obstetrical wards were visited by a severe epidemic of septicæmia, introduced by a scarlet fever patient. I preserved the record of forty cases of high temperature, which all presented much the same symptoms, developing tenderness in the abdomen in a short time after delivery, and in twelve hours the tympanitic distention of the bowels appeared. This abdominal distention is very characteristic, the women looking not unlike the cases of abdominal dropical effusion which you so frequently see tapped in this clinic-room.

The evening temperature generally was 104° – 105° , commonly followed by a chill, with marked signs of impaired circulation, difficult breathing, dyspnœa, local pain, more particularly noticed on pressure; and death usually occurred gradually, in about forty-eight hours, from interference with the circulation; the consciousness was preserved until almost the last moment. In most of these cases you will be able to trace this appalling condition of affairs to a local sore, lacerated cervix, and the introduction of septic material. Of course, in this house the conditions are more favorable for its development; the buildings are old, saturated with germs, and the obstetrical wards but little removed from large surgical rooms which are simply reeking with bacteria, micro-organisms, etc., which are but too ready to be carried across the nominal boundary-line. You will thus readily see that the hospital accoucheur is liable to meet more of these cases than in private practice. In fact, it is rare, in an ordinary normal labor in private practice, with no laceration or tearing, and when the forceps have not been used, to meet with excessively high temperature after delivery. From the foregoing remarks you will readily appreciate that the practical point of this lecture hinges upon the *treatment*.

First and foremost, I believe that many of the cases that we hear of septic trouble are due to meddlesome midwifery; for I venture to say that very many of the forceps cases are meddlesome midwifery. I advance this statement from actual observation. I am also convinced that forceps are too much used, and

that they are frequently had recourse to not so much for the patient's weal as for the doctor's convenience.

In primiparæ, owing to various causes, too rapid labor may occur, the head passing the os before it is fully or widely dilated, and in consequence a laceration is produced, which directly favors the entrance of septic matter and its attendant train of evils.

Let me impress upon you the fact that you hold the lives of your puerperal patients literally in your hands, and that the practitioner cannot be too careful regarding cleanliness, especially as a busy man may be tempted to go at once from a scarlatinous patient, for example, to a labor case, when he may in all probability encounter an adherent placenta, leading him to introduce his hand, teeming with disease-germs, into the womb, and laying the patient open to grave danger of blood-poisoning.

Listerism shows marked results in reducing the prevalence or liability of septicæmia, though in my opinion the nail-brush, soap, and water are quite as valuable as carbolic acid, if used frequently enough. I must confess that puerperal fever is too often simply another and high-sounding name for carelessness. I do not advocate the delivery of women under the spray, nor am I satisfied as to the efficacy of carbolic acid unless carried down and laid directly on the septic centre.

Causes.—Septic material and a denuded surface for its entrance, as an abrasion of the mucous membrane, represent the slow-match and the train. In primiparæ this mucous tissue will stretch but little; longitudinal vaginal tears or rents are therefore frequently seen, and in many cases laceration of the cervix occurs. We then have the most favorable condition offered for the production of septicæmia and hyperpyrexia: as the cervix is high up, it requires more attention in order to keep clean, and the anatomy of the part is particularly favorable to the absorption of any matter in contact with it.

For the prevention of this undesirable condition I will mention three means:

First, prevent the access of septic matters to denuded tissues by cleanliness.

Second, make proper application of antiseptics to local abrasions.

Third, administer drugs which act directly on the uterine tissue, preventing the absorption of septic material by causing contraction.

After labor you should find the womb firm, hard, and globular; after a time it will relax, become larger, the cavity opens, and the sinuses again become patulous. It is now that the septic material gains entrance and starts on its death-dealing path. Here we find the indication for drugs.

Fordyce Barker some ten years ago insisted upon keeping the womb firmly contracted, and showed very conclusively the value of ergot, nux vomica, quinia, and iron,—in fact, of all drugs which contract tissue and act on unstriated muscle-fibre.

You will find great diversity of opinion in regard to the action of these drugs; for example, some claiming for quinine a powerful oxytocic action, others stoutly denying it, and advancing as an argument the fact that Southern women while pregnant take large quantities of the drug, made necessary by their malarial climate, without any bad effects.

A paper published in France in 1872 or 1873 probably gives us the true explanation of the action of these two substances. By experiments on animals it was found that ergot did act upon the uterus, provided that it was determined to that organ by some irritation, and if this irritation did not exist it would not act. So with quinine. The conditions are the same in the human female as in the animal with the artificially-irritated womb. We thus find that ergot and quinine will be determined to the organ, in the case of the former, at all events, producing decided contraction. High temperature is a danger in itself, as it produces acute fatty degeneration of the cardiac and uterine muscular fiber and of that of the intestinal canal; in fact, all the essential muscles succumb to this pathological action; as a result we have meteorism, attended by its disastrous consequences that I have already referred to. The womb in this condition is unable to contract. The knowledge of this fact is, I take it, the touchstone in guiding the case to a successful termination, and this point escapes many in their after-treatment of these cases. Some

authorities say that this degeneration is due to fever-poison coursing through the circulation, as seen in the typhoid fever heart; but, according to my interpretation, hyperpyrexia is the root of the trouble.

Death will rapidly occur, occasionally from excessive meteorism, but generally from extreme prostration; and, as this latter condition is due to a burning up of the tissues, the important indication is to depress rapidly the temperature, prevent absorption from abraded surfaces, secure proper contraction of the womb, and relieve local symptoms. First and foremost, we should aim to secure an abundant supply of pure fresh air, make the patient as comfortable as possible under the circumstances, and administer full doses of quinine as an antipyretic and for its beneficial tonic action on the nervous system, as we know the uterus is so dependent on nerve-influences, and, furthermore, as the contractions are entirely involuntary. You may also use cold applications, spraying, etc., or the cold coil, which is so popular with English accoucheurs.

I usually, especially in this house, make it my routine practice to administer quinine and ergot immediately after labor, believing, as I do, that they exert a specific action on the womb.

I also deem it expedient to exhibit small doses of light cathartics, more especially when we are treating high temperature, a dry coated tongue, etc. Calomel is usually selected, in doses of of $\frac{1}{16}$ $\frac{12}{12}$ $\frac{1}{8}$ gr., rubbed up with sugar of milk, and taken every half-hour until a decided action on the bowels is secured, when the thermometer will register a marked fall in the temperature and your patient will feel much more comfortable. I always administer this calomel treatment, even after we have sewed up up the perineum, for example. I do not at all advocate putting the bowels "in a splint," as our patients are decidedly more comfortable by having a daily evacuation, and, furthermore, there is less chance of tearing out the stitches. It is my practice to require the bowels of a parturient female to be opened before labor; but this, of course, is difficult to regulate in private practice.

As I have already told you, an important indication is to give

drugs which will promote uterine contraction. The following I find is the most acceptable way to administer them :

R Ext. ergotæ fl.....	f5iii
Tinct. nucis vom.....	f5ss
Tinct. ferrī chloridi.....	f5ii
Acid. muriat. dil.....	f3i
Syr. limonis.....	
Aquæ, āā q. s. ad.....	f5vi

M. S.

This is usually an unpleasant mixture ; but if you direct that the acid and iron be first added together, and then the nux vomica, you will prevent formation of the tannate of iron, and consequently the inky taste.

For the same motive,—namely, to promote uterine contraction, I am a firm advocate of the binder, especially in a loose, flaccid abdomen following great stretching, and also of the use of turpentine externally. The irritation of constant pressure will secure contraction and prevent the gradual enlargement of the womb.

The Use of Vaginal Injections —This is the most important part of my lecture to-day. Dr. Thomas found, as I have already mentioned, that injections of carbolized water into the uterine cavity would reduce the general bodily temperature three to four degrees. You must use a Chamberlain tube which is of large calibre and will not allow the fluid to be introduced directly into a uterine sinus, the consequence of which would, as you know, be disastrous to your patient. If, however, the laceration is farther down in the sexual canal, you must be careful that your nurse does not simply wash the septic matter up into the womb and imprison it there : hence direct her to introduce the syringe high up, so that the water in finding its way to the external parts shall carry all septic material with it.

Personally, I do not ordinarily use syringes in private practice, and I do not meet with any higher temperature than those who use them in the old fashioned way. I depend on securing tonic contraction of the womb by firm external pressure and reflex irritation, and simply order the nurse to wash the patient thoroughly with an antiseptic solution. For this purpose I use

an old-fashioned remedy,—*i.e.*, alcohol in which is dissolved as much castile soap as is possible: this is soft, agreeable, and thorough.

In France they use solutions of corrosive sublimate as a wash, also intra-uterine suppositories of iodoform. This has reduced temperature as effectually as Thomas's carbolized water. There are also various antiseptic washes, but I will not occupy your time with them: the principle upon which they all are used is, as you know, their toxic action upon the lower forms of life.

If you reflect for an instant, you will see that the walls of the parturient canal after labor are once more approximated, and air does not enter. There is little chance for the accumulation of discharges, if you direct your patient to move about. I do not at all believe in allowing our puerperal patients to lie flat on their backs; you must order that they move about in the bed, turn from side to side, and thus relieve the canal of clots and discharges. Position, thus, to some extent, takes the place of injections. Hence I would impress upon you not to use the injection mechanically, and not to order it because it is fashionable; see to it that the nurse does not do more harm than good. Watch the heart and pulse, that their strength may be kept up and the temperature reduced. You must be prepared to associate digitalis with the medicinal treatment as soon as any tendency to heart-failure is manifest.

In some text-books, but more particularly in journals, aconite and veratrum viride are recommended in cases of puerperal fever. I warn you about these cardiac depressants. Do not let these journal articles cloud your reason; it is only in the early stages of the disease, and more especially in puerperal peritonitis, that you are at all justified in prescribing these drugs, and thus bleeding the patient into her own body, just as leeches would do externally; it is only in a typical sthenic case, in fact, in a case in which the older practitioners would bleed from the arm, that you are at all justified in exhibiting these depressants, and then my preference would be for aconite. Some, however, recommend veratrum viride. As a rule, these cases are asthenic, when the general plan of treatment must be stimulant, both general and cardiac. The study of the *vomiting* is also of great importance.

It is most obstinate and appalling in private practice; you will frequently meet with cases who cannot tolerate even a tea-spoonful of pure cold water. This vomiting is of pneumogastric origin, due to the irritation of the remote fibres of the nerve found in the sexual organs.

Drugs must now be administered by the hypodermic syringe, or by rectal suppositories. Quinine may be given by the former method; there is little danger of producing abscesses, provided the solution be perfect and the needle deeply introduced into the muscular fibre.

Opium is indicated, and may be introduced by either the latter or the former method. The indication is, of course, the relief of pain or vomiting, quelling the nervous excitement, and as a tonic to the nervous system. If the pain is local and low down, a suppository is more efficacious; otherwise a hypodermic of morphia and atropia, small doses of calomel, dilute hydrocyanic acid, or complete rest of the organ may relieve the vomiting.

To secure the requisite amount of nourishment for your patient is, of course, difficult under these circumstances. Milk and lime-water frequently repeated and in small quantities is efficacious, also brandy and frozen beef-tea, or beef-juice, thus relieving thirst and supplying food at one and the same time. Koumiss will sometimes be retained when milk will not. Carbonic acid water added to the milk makes it light and palatable. Iced champagne will refresh and relieve the patient. You must use free feeding and stimulation.

I know of no more appalling death that you will witness than one of puerperal septicæmia, the patient gradually dying of exhaustion and from fatty degeneration of the heart-muscle, with consciousness fully retained until the last scene in the drama of life is over.—*Medical Times*.

DANGERS OF THE USE OF ERGOT IN PROGRESSIVE LOCOMOTOR ATAXY.

Grasset reports a case of this affection, aged 38, widower, without children, father suffered from rheumatism; had committed venereal excess; no history of syphilis. Four years ago

rheumatoid pains, and headaches lasting for two years; then, sudden paralysis of the third nerve on the right side, with diplopia and vertigo. Two or three months later disturbance of motility, heaviness in walking and incoördination; light darting pains in the limbs, but very severe in the rectum and perineum.

In 1880 the disease was well marked (disturbance of sensibility of the lower extremities), atony of the sphincters, incoördination, etc. First season at St. Malo. In 1881, second season; decided improvement. The sphincters act almost normally; the patient walks well; he spends the winter at Hyères, always better. At the end of the winter he becomes more easily tired, more heavy; however, this condition improves, and he goes to Paris to consult Charcot, who had already seen him. He is ordered at first 25 centigrammes of ergot a day; increasing steadily at the rate of 5 centigrammes a day, until 1 gramme is taken. The patient was ordered to continue at the rate of 1 gramme a day for three days, then to stop and take in place of it the nitrate of silver. The patient returns to Marseilles, and continues the treatment without consulting any local physician. He takes the ergot, and the second of the days when he is to take one gramme daily, he has paralysis of the four extremities and of the voice; he cannot stir, and says he felt the paralysis coming on for a day or two past. The sensibility is much diminished in the paralyzed limbs, even in the upper extremities, which had up to that time always been intact. He has no pain anywhere, but cannot move; he can neither rise nor remain seated, but is condemned to absolute immobility. He stops the ergot immediately; a steady improvement at once begins. At the time of the examination by Grasset the arms have almost completely recovered, the patient writes. The voice is entirely restored. He can seat himself very easily on his bed, and remains seated. Some urinary difficulty persists, no disturbance of the rectum, has incoördination in the movements of the lower lids, especially when the eyes are closed; slight ptosis of the upper lid; no patellar tendon reflex; very slight disturbance of the sensibility of the lower extremities.

The author believes himself justified in attributing this sudden and marked change for the worse to the noxious influence of

ergot. The patient at the time he began taking it had been steadily improving; during its continuance paralysis comes on; the remedy is stopped, and, at once, there is an improvement. Nor has the dose given been at all excessive; the majority of authors, who recommend it, give more. Hammond advises from five to six grammes daily continued for several months; Erb, who scarcely recommends it, cites Waldmann and says he gives from one to two grammes daily. Since the labors of Brown-Sequard, ergot has been considered as indicated by hyperæmia of the spinal cord, and the fact that the patient was experiencing some fatigue, and that therefore an increase of the trouble was imminent, would seem to have fully justified its use. Yet the result was disastrous.

The author then quotes from Nothnagel and Rossbach with reference to the physiological action of ergot on the spinal cord: "In warm-blooded animals, the aqueous extract of ergot in comparatively small doses, and doubtless sclerotic acid also, produce anæsthesia, and disturbances of coordination; in large doses they cause paralysis, during which the animal manifests neither voluntary nor reflex movements and is insensible to the most painful irritation."

But the last results published by Tuzek are of particular value with regard to the case of the author. Following a severe epidemic of spasmodic ergotism, which affected 500 persons in a country of 2,500, 29 persons affected with psychical troubles entered the hospital at Marburg. Tuzek's report embraces the last eighteen of these, on four of which an autopsy was made.

All the patients manifested symptoms of lesion of the posterior columns of the cord; in the four cases which succumbed, this lesion was proven anatomically. In all cases, the knee reflex was absent and did not reappear when the cure in other respects seemed complete. The other spinal symptoms were: Paræsthesias, formication, darting pains, anæsthesia, analgesia, symptom of Romberg ataxia. In some cases the complete picture of dorsal tabes developed. The four spinal cords examined belonged to individuals of 9, 16, 20 and 33 years of age. The lesion of the posterior columns occupied the entire length of the cord; in two cases it could be followed into the medulla; it was

symmetrical on the two sides and was limited to Burdach's columns. In the most marked case, where the lesion involved nearly the whole of the posterior columns, it was seen that the process was older and more marked in the lateral fasciculi. Tuczek concludes that ergot had produced in all the individuals a systemic spinal lesion, absolutely identical with tabes dorsalis. A great number of experiments in animals had failed, but he had seen the hypodermic injection of sclerotic acid produce a veritable ataxy in rabbits.

This last fact, if confirmed, is of great value to experimental pathology. It is most important that ergot develops in certain cases posterior spinal lesions comparable to those of locomotor ataxy as well as in their pathology as their symptoms. For this reason the author urges the most stringent precautions in the treatment of locomotor ataxy by ergot.

J. E.

—*From the Progres Medical, in the Cincinnati Lancet and Clinic.*

NOTES ON CHOLERA AND ITS TREATMENT. By Surgeon-General C. A. GORDON, M.D., C. B., Honorary Physician to Her Majesty the Queen.

Diarrhœa may occur as an independent affection in times of cholera, or it may happen as an early stage of the latter disease. When cholera prevails it is difficult to decide correctly and with precision where diarrhœa as such ends, and where distinctive cholera begins. The symptoms of the two affections differ in degree rather than in kind; but it is usually considered that the retention of color in and slower progress of diarrhœa by itself are to be taken as indicative of the milder malady.

Diarrhœa, when it occurs as a premonitory stage of cholera, has a duration seldom exceeding three days. As regards the prevalence of this affection among masses of population, it has been observed to vary from a few days to several weeks. In 1866 statistics regarding this point were taken in London. In 41 examples on that occasion recorded, the duration of the diarrhœa in 3 cases was 12 hours, in 1 case 18 hours, in 1 case 19 hours, in 7 cases 33 hours, in 12 cases 2 days, in 6 cases 3 days,

in 2 cases 4 days, in 2 cases 5 days, in 1 case 6 days, in 1 case 7 days, in 2 cases 2 weeks, in 1 case 5 weeks, in 1 case 8 weeks. The general result of these observations shows that in more than half the number of cases diarrhœa preceded the more marked symptoms by less than three days. On that occasion in London there was a subsidence of diarrhœa before the outbreak of cholera. A similar subsidence had preceded the outbreak of 1848-9 and 1853-4.

In some instances epidemics of diarrhœa have been considered to be really epidemics of cholera, although occurring in that form. In 1836 this was the case in the Indo Chinese fleet. On that occasion the epidemic of diarrhœa which prevailed was considered to take the place of cholera which had in previous years occurred in the same fleet. At Huddersfield in 1849, diarrhœa and cholera prevailed simultaneously in so defined a manner that the cause which produced them both was considered to be identical, only the form of resulting disease to differ in different individuals. At Oxford in 1852, deaths took place by diarrhœa without the cases passing into confirmed cholera. And similar occurrences are noticed in other epidemics of the disease.

Persons coming from infected localities have been attacked with diarrhœa within a period extending to fourteen days from the date of their departure, the disease in them undergoing no farther development; and yet confirmed cholera occurred in the locality into which such persons had entered. Occurrences of this nature happened in France during the epidemic of 1855—notably at St. Germain, Melissy, St. Barthélemy, and Villedieu. The Constantinople Commission acknowledged that cholera could be propagated in this manner.

It has come to be acknowledged as an axiom that the more severe the impending epidemic of cholera the shorter is the period of premonitory diarrhœa. In young persons diarrhœa in connection with cholera is considered to be of more frequent occurrence than it is in those more advanced in years. In a number of instances cholera has manifested a partiality to individuals habitually subject to diarrhœa.

Diarrhœa is said to occur more frequently in attendants on cholera patients, and in them to take the place of the more de-

veloped disease. In 1873 this circumstance was noticed in connection with the epidemic at Ottawa.

But although diarrhœa often precedes cholera, this does not happen invariably. There was no premonitory diarrhœa on the occasion of the cholera outbreak in the 86th Regiment at Kur-rachee in 1846; none in the Madras epidemic of 1848. In the French epidemic of 1855 diarrhœa is mentioned by 97 reporters; by 15 its occurrence is considered exceptional. In the Crimea in that year our troops were seized, in many instances, with collapse of cholera without any premonitory symptoms whatever. At Gateshead in the same year 55 persons who went to bed in perfect health on the 25th of December, were attacked with cholera before sunrise on the 26th; and of the number so attacked, 32 were dead before sunset. In 1861 there was no marked prevalence of diarrhœa before or during the epidemic of cholera at Delhi. In 1866 diarrhœa, and indeed all other premonitory symptoms, were absent on the occasion of the cholera outbreak at Mean Meer. At Peshawur the attack of cholera in the 12d Highlanders was sudden, and unpreceded by premonitory symptoms. Other instances could be given in illustration of the fact that, although on occasions cholera is preceded by diarrhœa, this is by no means an invariable occurrence.

The success of the treatment applied in cases of cholera depends in a very great degree upon the early use of that treatment. For example, in London in 1849, there were treated 43,737 cases of "premonitory" diarrhœa, and of this number 58 only developed into cholera. In that year throughout England there were treated 130,000 cases of diarrhœa, of which number only 250 passed into cholera. A question was raised as to whether many of the cases so treated were not cases of simple diarrhœa. Perhaps they were; it is impossible to say. From calculations made in Glasgow in reference to the epidemic of that year, it has been stated that of persons treated within the first six hours after attack by cholera 21 per cent. died; of those first treated between six and twelve hours after attack, 33 per cent.; of those between the twelfth and twenty-fourth, 45 per cent.; and of those treated later, 66 per cent. In India the importance of early treatment is universally recognized, and special orders on this

point are enforced in respect to soldiers. In 1877 the observance of such orders was followed by important success at Madras.

Briefly, the remedies administered in the stage of premonitory diarrhœa comprise carminatives, antispasmodics and astringents.

In the treatment of fully-developed cholera remedies of the most diverse nature have been used from time to time. Perhaps the earliest method on record was that which of late years has been called the "eliminative." That method dates from the year 360.

In the sixteenth century venesection, ligatures to the head, limbs and loins, acupuncture, pepper in rice-water as a drink and applied externally, were the means employed. After the violence of the disease had passed, purgatives were given.

In the seventeenth century the natives of India withheld liquids from patients affected with cholera, and cauterized the soles of their feet. Among the remedies administered were diffusible stimuli, saffron, opium, vegetable astringents, and ammonia. Towards the end of that century, and in the early part of the eighteenth, the French Missionaires at Trichinopoly administered to the cholera patients "*un peu d'eau bénite et se mit à réciter quelques prières,*" with the happy result, as stated by themselves, that "*le malade guérit subitement.*"

Among the remedies used in the eighteenth century were the following:—Calumba root in 1756; cassia fistula and rhubarb in 1761-63; opium and rice-water in 1769; Glauber salts with tartrate of antimony, in doses of one-eighth of a grain, in 1782; Madeira wine, laudanum and cordials also in that year; castor oil at Arcot in 1787; large doses of opium at Batavia in 1789.

During the portion of the nineteenth century already gone, methods of treatment in their nature absolutely the opposite of each other have been used. In 1817 large doses of calomel, combined with small quantities of opium, were given. In 1831 emetics of ipecacuanha were said to have "acted like a charm;" on the same occasion sulphur and phosphoric acid internally were given. In 1832 venesection, used, as already stated, in the sixteenth century, was reverted to; in 1849 the same method

was for the third time practiced. Naphtha was employed for the disease as it occurred among the Prussian troops in the Caucasus; and, under the name of "elixir of Woreneje," that substance is believed to have been employed for the same purpose in Russia. In 1848-9 naphthaline and petroleum were given internally in the United Kingdom.

The use of opium vaunted by some writers is utterly condemned by others. During the epidemic in France, 1855, opium was extensively used; the result assigned to such use being that in some instances living persons were buried while in a state of narcotism only. There are many medical officers of great experience, who assert that it is chiefly among patients thus treated that the severe train of symptoms known as "secondary fever" occur.

With regard to ipecacuanha, about twenty reporters record their experience with that drug. Of 4,180 patients treated by means of large doses of it, 2,509 died.

Evacuants, praised by some writers, are by others stated to be deadly. The same remark applies to the use of tobacco fumes. Antispasmodics—notably, ether and chloroform—are used with the greatest advantage against spasmodic phenomena in the course of the disease.

Among the means applied externally and variously reputed have been frictions and excitants; hot baths, with and without aromatic herbs; bags of hot sand to the hands and feet; the application of cold; galvanism, etc., etc.

Among various other remedies used from time to time are the following, they being but a very few out of a long catalogue, namely:—Hot negus, with grated nutmeg; quinine, strychnine and nux vomica; sulphate of copper; homœopathy, practiced, it is said, during the epidemic in France with sad results; hypodermic injections of various kinds; inhalation of gases; transfusion of blood and of different saline mixtures; purges; astringents, carminatives; alkalies; sulphur; sulphuric acid; chloral, both by the mouth and hypodermically; acetate of lead; tartrate of antimony; stimulants; preparations of iron; hydrosulphuret of ammonia; olive oil; yeast; eupatorium, etc. For a time *Sumbul*, the product of *Euryngium Sumbul*, N. O.,

Umbellifeaz, was used. In 1864 a solution of permanganate of potass was given in India.

In order to account for the insuccess of medical treatment in cases of declared cholera, the circumstance must be borne in mind that for the time being the function of absorption is in abeyance; especially is this the case in the algid stage of the disease.

But, while on the one hand there is no certainty of saving the life of a person attacked with cholera, neither is it right or justifiable to despair as to the results of means reasonably employed, even in cases the most desperate.—*Medical Press and Circular*.

THE GERM THEORY OF TYPHOID FEVER, AND THE TREATMENT OF THIS DISEASE BY SALICYLATE OF BISMUTH.

The tendency of the age is undoubtedly to account for all the contagious febrile affections, as well as many chronic diseases, by the hypothesis of a specific microphyte, whose ravages constitute the pathogenetic element. This tendency is exemplified in the theory, recently formulated, and ably supported by Klebs, of Prague, and Eberth, of Zurich, as to the etiology of typhoid fever.*

According to these pathologists, typhoid fever is due to a peculiar microbe which presents itself in the form of rods or filaments, some of which contain spores. Between the rods and the filaments transition forms are observed, which make it probable that the latter are derived from the former.

These micro-organisms have been found by Klebs, in accordance with the period of the disease from which death resulted, in the following localities: 1, in the intestine, first in the glands of *Leiderkuhn*, later in the interglandular tissue and in Peyer's patches, still later in the submucous cellular tissue, and even in the muscular layer; 2, in the mesenteric glands; 3, in the spleen; 4, in the lungs (the parts affected with hypostatic pneumonia); 5, in the brain.

He has also found them in abscesses complicating typhoid fever,

* *Bulletin gen. de Therapeutique*, June 30, 1883. Desplat's article, to which we are indebted for this summary.

in ulcerations of the larynx, in the kidneys, the myocardium, etc. In these various sites he has detected the same microbe, and in numerical abundance proportioned to the disorder of function of the organ where the bacillus has been found. Klebs has made many cultures of the microbe, and has inoculated animals with the final product, reproducing in hares, pigeons, guinea-pigs, etc., the characteristic anatomical lesions of typhoid fever.

Eberth, of Zurich, after an independent series of investigations, has found in the lymph-organs of the abdomen—intestinal mucous membrane, mesenteric glands, spleen—certain rods whose characters correspond with those noted by Klebs. These rods have, in fact, been identified with Klebs' bacilli.

Klebs gives a graphic *résumé* of the march of this malady. The bacillus typhosus, or its spores, are taken into the mouth and pharynx in the act of respiration, and are carried to the stomach with the saliva or food. Arriving in the small intestine, they produce by their multiplication a diffuse catarrhal inflammation, and commence to penetrate the mucous membrane. This anatomical stage corresponds to the period of incubation of the disease, a period characterized by anorexia, prostration, and a slight febrile movement. At this epoch the disease is still local; it is not till later, when the bacillus has effected an entrance into the blood and has invaded the organs, that we witness the second "classic" stage, the stage of infection, characterized by fever, cerebral symptoms, etc. At the same time the intestinal inflammatory process concentrates itself on Peyer's patches, which finally become necrosed and eliminated. The microbes, moreover, may multiply in the spleen, brain, lungs, and produce there grave disorders.

It sometimes happens that the bacillus first undergoes development in the lungs; the disease then commences as a pneumonia (typhoid pneumonia); at the autopsy the intestinal lesions (when they exist) are more recent than the pulmonary lesions.

The primitive lesions of the intestines are not always in such direct relation to the secondary lesions of other organs, that to the intestinal alterations, however extensive and profound, corresponds a proportionate perturbation of other functions of the economy. The autopsy often demonstrates that the intestinal

ulcerations may be most marked and grave, at the same time that the general infection may have been almost nul; such are the cases described as *typhus ambulatorius*, or walking typhoid. On the other hand, with general infection and serious constitutional symptoms, the local intestinal lesions may be inconspicuous or wanting. In a word, typhoid fever comprehends two distinct diseases; the local intestinal lesion, and general infection with localization in different organs. These two factors of this complex disease are synchronous in a part of their duration. The first precedes the second, and the latter is in full evolution while the lesions of the former are undergoing reparation.

The germ theory of typhoid fever is far more probable than the chemical theory; in fact, we can imagine no chemical ferment or "poison" which is capable of producing such phenomena, while the hypothesis of a *contagium vivum*, infinitesimal in its commencement, pullulating in the system, and invading important vital organs, which are robbed by it of their life-sustaining oxygen and pabulum, till the environing conditions are no longer favorable for the maintenance of the parasite, well explains all the striking phenomena of the disease. Moreover, important inductive evidence is every year making the microphyte theory less an hypothesis and more a fundamental fact in pathology. The inoculation experiments of Klebs, above alluded to, constitute the kind of proof now demanded.

Almost all pathologists being convinced of the germinal origin of all contagium, there is a dominant desire on the part of therapeutists to attack the microbe by suitable germicides in the alimentary canal or in the blood, to prevent its multiplication and effect its destruction. There is very general agreement that we are not yet in possession of any sure and safe means of combating the germinal *materies morbi* when once it has effected entrance into the blood. No one has more clearly shown this than Professor Germain Sée in a late lecture.* Quantities of any known antiseptics, such as would be necessary to rid the blood of the parasitic contagium would be toxic and speedily fatal to the organism. This is notably the case with such germicides as bichloride of mercury, chlorine, iodine, carbolic, and

* *Traitement de la Fièvre Typhoïde*, Paris, 1883.

even salicylic acid. Salicylic acid, the only acid to be seriously thought of in this connection, has never yet been given in sufficient doses to arrest typhoid fever in its march, or even materially to modify its evolution. Professor Sée has known of a rheumatic patient who, while taking ten grains every two hours of salicylic acid for several days, was nevertheless attacked by typhoid fever, which pursued its usual course.

Being then debarred from any safe and certain chemical antidotes against the morbid bacillus when it has pervaded the system, our therapeutical efforts are diverted to other indications, such as the support of the vital forces in the struggle in which they are engaged. But can we do nothing to effect the destruction of the disease-germ while it is in the alimentary canal, before it has penetrated the tissues or gained the circulating fluid? Not a few distinguished therapeutists have answered this question in the affirmative, notably Gueneau de Mussy, Herard, Hallopeau, Liebermeister, Wunderlich, and in this country, Dr. James C. Wilson and Roberts Bartholow.* The treatment of the last two authorities is essentially identical. Calomel is given in full purgative doses during the first week. This is exhibited for a double purpose, to restore heat production and to destroy typhoid germs in the intestine. Iodine is given throughout the disease, in combination with carbolic acid, or as Lugol's solution. Bartholow's formula is two parts tincture of iodine to one of strong carbolic acid; of this from one to three drops every three hours during the day and night.† By this medication it is intended to arrest the multiplication of germs in the intestine and prevent fermentation.

Professor Henri Desplats, of Lille, is favorably known by his numerous theses on the antiseptic treatment of fevers, especially by a memoir published last year on the treatment of typhoid fever by carbolic acid. After long experimentation with various salicylates in typhoid fever, he has found in the salicylate of bismuth the great desideratum. It is sparingly soluble, and therefore is

* Vide Wilson on Continued Fevers, p. 228. New York, William Wood & Co. Also an able statement of Wilson's and Bartholow's antiseptic method of treating typhoid fever in the *New York Medical Journal*, vol. xxxvii, page 298.

† *Boston Medical and Surgical Journal*, February 1, 1883.

more likely than most medicaments to escape absorption in the stomach and to reach the diseased intestine. It moreover has an energetic action on the organized ferments, and is a bactericide of great power. Taken during the prodromic period, when the infection is purely intestinal, the microbes not having entered the blood and tissues, its efficacy is greater; in Dr. Desplat's experience it has even had a marked abortive action. Thus, out of twenty cases reported by him, eleven (or more than one-half) treated in the first stage were cut short in four or five days under the free use of salicylate of bismuth. At least this is the belief of the professor, who gives the particulars of these cases with great minuteness, showing that the patients had all the characteristic symptoms of the disease with varying degrees of severity. In four cases the bismuth salt had a very decided moderating effect on the temperature, but the disease was prolonged by complications. In five cases, all of which were very grave, the action of the medicament was nul. The ordinary dose was about a scruple. This was repeated sufficiently often, so that the daily quantity taken should equal about six grammes (or about one drachm and a half). In some instances, where the fever-heat was excessive, the salicylate was given in one full dose of three, or even six drachms, but these large doses proved somewhat depressive. The medicament is not unpleasant to the taste and is easily borne. In short, the perusal of this article seems to justify the hope that in the salicylate of bismuth we have a new medicament of very great antiseptic value.—*Medical Record*.

SOME POINTS IN THE REPARATIVE SURGERY OF THE GENITAL TRACTS.

Dr. M. A. Pallen of New York, in a paper on this subject, writes: All fallings of the uterus, from the slightest prolapse to the completest procidentia, necessarily involve most or less folding of the vagina upon itself; and, should the substructure, the perineal conjunction, be absent, the process of vaginal folding ultimately becomes complete inversion. Without the necessary amount of time to properly discuss the relations of

vaginal dislocations to the perfect integrity of the perinæum, I propose to formulate certain propositions.

1. Should there be perineal laceration, even if the uterine structure and circumuterine spaces be perfectly normal, the organ, sooner or later, necessarily sinks in the pelvis, most frequently in retroversion.

2. All perineal lacerations, from a simple submucous muscular sundering (of the *transversus perinæi*, *sphincter*, and *levator ani* conjunctions), to a rent that extends into the bowel, necessarily beget vaginal dislocation, primarily as a slight, later as a complete rectocele, to be followed by a prolapse of the anterior wall, causing urethrocele and cystocele.

3. Urethrocele and cystocele seldom occur spontaneously; they ensue from pressure above (very rarely), or they follow from perineal sundering or laceration. I have never seen a case of cystocele, or even much urethrocele, that was not associated with some prolapse of the posterior vaginal wall.

4. All operative procedures for the *suspension of a prolapsed uterus must be directed mainly to the posterior vaginal wall*, because it arches upon the perinæum below and the uterus above, serving chiefly as a column of support. The anterior vaginal wall, being straight and shorter, serves rather for the support of the urethra and bladder, and being adherent to the pubo-vesical spaces, it prevents the full bladder from rolling the uterus in retroversion.

5. Operations restoring the integrity of the perinæum and posterior vaginal wall, usually develop symmetrical correlations of the canal. In cases of complete procidentia, a perinæum restored by plastic procedures which strengthen the recto-vaginal septum will eventuate in a permanent cure, a condition I have never seen in making operations confined strictly to the anterior vaginal wall.

These propositions assumed, I feel satisfied that very many successful issues of *perineo-vagino-plasty* prove that the theory upon which the operation was based is correct, viz., that the conjunction of the *transversus perinæi*, *sphincter ani*, *pubo ischio-coccygeus*, and *levator ani* muscles, (described, but never actually demonstrated as the perinæum) is the true and correct

foundation upon which the posterior vaginal wall rests, and that the support rendered by the connective tissue in front of the rectum is but secondary, in consequence of the variable calibre of the bowel. The anterior column of the vagina is straighter and shorter, and, as before said, mainly supports the bladder and urethra; but the posterior vaginal column, added to the masses of blood-vessels furrowing the peri-vaginal connective tissue, tends to support the uterus; therefore, when the basement support of the vagina (perinæum) gives away, it folds down upon itself, and drags the uterus in retroversion. I would state *en passant*, that I exceedingly doubt the efficacy of the so-called ligamentous support of the uterus, farther than the misnamed structures (broad ligaments) serve as vehicles for carrying masses of erectile tissue and blood-vessels; and that in the healthy female the uterine body maintains its normal plane, or it is lifted, or it is depressed therefrom, in consequence of plentitude or emptiness of these same blood-vessels. Furthermore, I am disposed to think that all misplacements, except from direct or mechanical causes, depend upon fracture or destruction of the connective tissue in the circumuterine spaces, because of pathological changes in the blood-vessels.—*British Medical Journal*.

CASE OF CO-EXISTENCE OF DIPHThERIA AND TYPHOID FEVER.

Dr. C. E. Paget, F.R.S., Regius Professor of Physic in the University of Cambridge, describes the following case:

The recent illness of the Postmaster-General may add interest to the following case. The patient was Mrs. J. K., a married woman, about twenty-eight years of age, living in Manor street, Cambridge. Three days before her illness began one of her children had died of diphtheria, two of them having been affected. Mr. Carter, who attended them, had no doubt as to the diagnosis. The children had sore throat and exudation upon it.

When I first saw Mrs. K. (on December 14, 1861), she had been confined to her bed about a week. From Mr. Carter I learned that her illness had begun with sore throat, and that there had been small white diphtheritic patches upon the throat. When I examined it I could find none, nor any signs of diph-

theria; but upon her abdomen were some of the rose spots characteristic of typhoid fever; and at the base of her right lung, to the extent of two or three inches, the percussion sound was dull, and small crepitation could be heard. She was feverish; her pulse was 130; her bowels loose. She was in the seventh month of pregnancy.

For six days she continued in much the same state, as an ordinary case of typhoid fever, with moderate pneumonic complications; her bowels loose; her pulse above 120; her tongue dryish, and a general condition requiring wine and brandy. During these six days her throat remained free from diphtheritic appearances; but on the morning of December 20 it again became sore, and in the evening the uvula and soft palate were covered with a white exudation, the adjacent parts being bright red. Her pulse then became a little less frequent, falling to 116. Chlorate of potash was now prescribed in small, frequent doses, and next day tincture of perchloride of iron. On December 28, her urine contained albumen. The exudation, after its reappearance on December 20, was seen from day to day; it had a diphtheritic character, and was very extensive. It was still present, though somewhat reduced in extent, on January 2. When I saw her on January 5 it had been completely cleared off.

Early in January she began to suffer much from retching and vomiting. She was troubled also with cough. The right lung was consolidated at its base, but to a small extent only. The vomiting so persisted from day to day as to bring her into great peril. On January 20 the liquor amnii escaped. Active delirium now came on, and continued for upwards of twelve hours, when she suddenly aborted of a seven months' child, which lived half a day. The mother nearly died during the removal of the placenta, though scarcely any blood was lost. After labor was completed, the vomiting ceased, and she gradually recovered.

Mrs. K. had been nursed during her illness by her mother, Mrs. S., aged 58, who lived in the outskirts of Cambridge, in an isolated cottage within a large garden. On February 14, 1862, she took to her bed with typhoid fever. She had the ordinary symptoms: the rose spots, loose stools, etc. She went

on favorably until March 13, when, after sitting up near an open door, she had rigors, ushering in double pneumonia and hæmorrhage from the bowels. She died on March 24.

The chief interest of Mrs. K.'s case is in the disappearance of the local signs of diphtheria, and their suspension for six days during the continuance of the typhoid fever, and then their reappearance and persistence for thirteen days or more. This appears to me a fact, not perhaps contrary to what might be expected, but at least worth notice. It differs from what was reported in the case of Mr. Fawcett.—*British Medical Journal*.

THE TREATMENT OF HAY-FEVER.—Mr. W. F. Phillips, of St. Mary Bourne, Andover, writes: It is just over five weeks since a lady placed herself under my care for the treatment of hay-fever, or summer catarrh—a very much better name. She had suffered severely for many years, and sometimes from the end of May to near the end of July, with little or no intermission, unless she kept indoors. Her mother, it is worthy of remark, was very sensitive to the odor of certain flowers, and was affected by some of them even to the extent of fainting. She was not subject, however, to summer catarrh.

Knowing how exceedingly unsatisfactory is the treatment recommended and practiced for this disease, as is sufficiently evident from the recent communications to the *Journal* on the subject, I sought for rational indications that might guide me to the selection of a remedy. I thought of the neurosis that seems to underlie most cases of this kind, and to constitute the essential cause or predisposition on which the disease depends; of the characteristic symptoms of the malady; the injection of the conjunctiva, the hyperæmia and hyperæsthesia of the nasal cavities, the excessive secretion of tears and mucus, and then I bethought me of a drug whose physiological action might indicate the possession of the power to control such symptoms. Belladonna was the drug that suggested itself at once, and I determined to give it a trial, all the more hopefully because I remembered how strikingly useful on similar indications, and by a parity of rea-

soning, I had often found it in ordinary conjunctivitis and simple catarrh. I began with the following prescription: R Succī belladonnæ mxxiv; aquam ad ℥ij. Misce. A teaspoonful to be taken every hour till relief is obtained. The medicine was taken without the production of any undesirable effect, and with very marked advantage indeed—an advantage that became still more evident and unmistakable, both to the patient and myself, when the dose was increased from one minim to one and a quarter (half a drachm in three ounces). Once, too, when the eyelids were especially tender, the patient was advised to use the mixture as a lotion to the affected parts, and this local application was found to be a most useful addition to the internal administration of the remedy. Repeatedly, when the symptoms of an attack had been allowed to begin, the patient found prompt relief after a few doses of the drug, the catarrhal affection disappearing first, and then the asthmatic; and on taking it regularly every day after the malady had been subdued, she has found to her delight that she can take her walks abroad through blooming grass and flowers without the least protection or precaution—a thing she had not been able to do before for years.

The patient, remembering no doubt the failure of past treatment, pronounces the remedy “a great success;” but, however satisfactory the case may be, it is, as far as I know, a solitary one, and therefore stands in need of confirmation and support.—*British Medical Journal*.

NITRATE OF AMYL AND NITRO-GLYCERINE IN URÆMIC ASTHMA.—Dr. Sheen, of Cardiff, writes:

“The brief notes I give below illustrate the value of nitrite of amyl and nitro-glycerine in one of the sudden and distressing, though perhaps rare, phases of chronic Bright’s disease—viz., uræmic asthma. Nitrite of amyl, acting, probably, through the vasomotor nerves, relaxes the arterioles, and thus reduces blood pressure. As it is very volatile, on the score of economy and convenience, I always carry some of Martindale’s capsules in my bag, and these are very handy for immediate use. Nitro-glycerine is said to have much the same action as nitrite of amyl,

and, according to Dr. Mahomed, its great superiority over amyl lies in its gradual and more lasting effect, and the more convenient manner of prescribing it, and it can be taken regularly two or three times a day, or oftener, in one minim of a one-per-cent. alcoholic solution being the usual commencing dose. It is also made up in chocolate tablets, each containing one-hundredth part of a minim; but its action, when given in this form, is not so rapid as that of the alcoholic solution.

M. P., aged 55, retired from business May 4, 1882. Has been ailing for two weeks, but has been about. Has noticed swelling of legs toward night for two months, and his face has swollen occasionally for the last month. Has always been careless of his health, and if he got wet—an event which happened not unfrequently—he would never change his clothes. He was taken suddenly ill last evening while out walking, about a mile from home, and had to be taken home in a cab. On visiting him at 10 A.M., I found him sitting up in bed, gasping for breath, countenance distressed, and of a sickly, pallid hue. Pulse feeble; temperature 98° ; tongue pale and sodden; expectoration frothy, with some little blood intermixed; moist *roles* over whole chest, back and front; urine abundant, clear, containing one-fourth of albumen. At 2 P.M. I found his condition and posture unchanged; he could only speak a few words before he had to stop for breath. He inhaled three minims of nitrite of amyl (a capsule broken in a handkerchief). Within a few minutes his breath was easier, and he was able to recline in bed for the first time since the attack came on before I left the house. I then put him on nitro-glycerine one hundredth part of a minim *ter die*.

May 5—He was lying easily in bed, breathing quietly, and expressing himself as feeling quite well, said he was only waiting till I came before he got up. I cautioned him that his life hung by a thread, and that he could only hope to continue it by the strictest obedience. Unavailing caution. On the 6th he still remained in the same improved condition. The next day he refused to take any more medicine, but promised to stay in the house—a promise which he did not keep. On the 16th he had

another attack, and died quietly within thirty-six hours, the urine being loaded with albumen."—*British Med. Journal*.

THE PICRIC ACID TEST FOR ALBUMEN.—Dr. George Johnson, M.D., F.R.S., Professor of Clinical Medicine, Senior Physician to King's College Hospital, writes :

It should always be borne in mind that, in testing for albumen, the *picric acid must be in excess*. A few drops of a saturated solution of picric acid in a highly albuminous specimen will form a coagulum, which is quickly re-dissolved. When urine contains much albumen, it should be mixed with its own volume of the picric acid solution ; and in testing a fresh specimen, it is better to begin by adding an equal volume of the test liquid.

One difference between picric acid and nitric acid as tests for albumen is, that whereas an excess of nitric acid, especially when the urine is heated, will entirely re-dissolve the previously precipitated albumen, no excess of picric acid will re-dissolve the precipitate which it has once found in an albuminous solution. Picric acid solution on the surface of the urine is applicable only for the detection of a minute trace of albumen. For this purpose, in my paper read at the Clinical Society, I advise that a column of urine four inches in height should be poured into a six-inch test-tube, and upon this one inch of the picric acid solution. The result is that the upper layer of the urine is mixed with about its own volume of the test liquid ; and if albumen is present, the stained portion of the urine is instantly rendered more or less opalescent, and thus contrasts with the unstained and transparent urine below. If the picric acid solution were allowed to flow so gently on to the surface of the urine as merely to come in contact and not to become mixed with its upper portion, the albumen, if present, would not be detected, or it would be indicated only after an interval of some minutes, when the two liquids had become mixed by slow diffusion. There must be an actual mixture in equal proportions, and not merely contact of the two liquids, to ensure the action of the test.

The slight opalescence caused by the picric acid solution in a

sample of urine which contains a mere trace of albumen is always increased by the application of heat. So that, if the flame of a spirit-lamp be applied to the upper part of the opalescent column, this will become more opaque than the lower part, which had not been exposed to heat. I now invariably apply heat to a specimen of urine which has been rendered opaque, or more or less coagulated, by picric acid; my chief reason for this practice is to ascertain if peptones ever appear in the urine. In a paper published in the *Journal* March 31st, p. 614, I have shown that, whereas the albuminous precipitate with picric acid is rendered more opaque and coherent by heat, the precipitate which picric acid gives with peptones is entirely re-dissolved by heat, considerably below the boiling point.

The microscope alone would serve to distinguish the precipitate caused by picric acid with peptones, with urates, and with albumen respectively.

The precipitate recently thrown down with artificially prepared peptone appears under the microscope quite homogeneous, and free from solid particles; but when the precipitate, having been dissolved by heat, re-forms on cooling, it seems to consist of numerous very minute, apparently globular particles, in which the so-called "Brunonian movement" is very active. The microscopic appearances of uric acid and urates are so well known as to need no description.

The precipitate produced by picric acid with albumen presents irregular clusters of granular material, which appear much larger and more opaque after the application of heat. According to my experience, a deposit of uric acid and urates is about as rare a result of adding picric acid to urine as a similar deposit caused by nitric acid; and hitherto I have met with no specimen of urine in which the presence of peptones has been indicated. A deposit thrown down by picric acid and re-dissolved by heat, may pretty safely be assumed to consist of urates, but in any case of doubt, the addition of Fehling's solution and the microscopic appearances will at once serve to distinguish between precipitated peptones and urates.—*British Medical Journal*.

THE HYGIENIC TREATMENT OF ALBUMINURIA. BY GEORGE B. SHATTUCK, M.D.

Senator delivered lately a lecture on this subject before the Berlin Medical Society, *which derives its value less from any novelty of the remarks than from the authority of the speaker in regard to renal disorders. Senator's conclusions are confirmatory of the best American and English writers' recommendations as to the treatment of albuminuria. After reminding the reader that the albuminuria is a symptom and measure of a disease, not a disease itself, that the amount of albumen lost—two and a half drachms daily being a very large amount—is not serious, though the local effect of its passage through the renal tissues is very possibly injurious, and alluding to the general recognized inadequacy of drugs in chronic albuminuria, Senator takes up the various points of hygienic treatment which offer hope at least of alleviation and prolonged comparative health, and among such emphasizes especially the following: (1.) The question of the nourishment of patients with nephritis should include a consideration of the influence exercised upon the albuminuria both by the condition of the digestive process itself and by the character of the nourishment. (2.) The rule may be accepted in general that with albuminuria the wants of the system should be supplied rather by frequent small quantities of food than by larger amounts at longer intervals. (3.) Eggs should be forbidden; meat and cheese used sparingly, and of meats preferably veal or poultry; fish is to be recommended; fruit and vegetables are indicated, but the leguminous varieties less so; the use of fat is to be governed by the state of the digestion; spiced, smoked and salted viands are unsuitable; red wine may be used moderately; beer, spirits and the heavier wines are to be avoided; a milk diet is extremely useful, but that it may be sufficiently prolonged bread or some similar addition should be made. (4) Saline or alkaline,—saline waters, warm or cold, according to the case, are found practically to act favorably, and this probably by effect upon the digestion and composition of the blood, as theoretically they should be a renal irritant; saline baths are useful through their congestive and stimulating effect upon the skin. (5) Mus-

* *Berlin Klin Wochschr*, No. 49, 1885.

cular exertion should be very restricted. (6.) An even body temperature should be sought by clothing, by climate, by retirement to bed if necessary. For clothing, flannel should be worn next to the skin; for a climate a warm and dry one should be selected, free from sudden changes, with a mean temperature from 60° F. to 70° F. (7.) Psychical influences are of great importance in this condition. (8.) With women during menstruation the amount of albumen excreted is always increased, and they should during that period be confined strictly to bed.—*Nashville Journal of Medicine and Surgery.*

DR. OSCAR A. KING, Professor of Diseases of the Nervous System in the College of Physicians and Surgeons of Chicago, is about starting a private hospital for the insane at Lake Geneva, Wisconsin. Its location at Lake Geneva, inasmuch as it places the institution beyond the reach of adroic law that govern the commitment of the insane in Illinois, and yet near enough to be taken advantage of by the unfortunates of the State.

THE American Microscopical Society has just closed its session. The meeting was large and exceedingly profitable. At the reception given to the Society by the Calumet Club, of this city, four hundred microscopes were on exhibition, and during the evening at least one change of slide was made, making an exhibition of at least eight hundred unique objects.

WE had the pleasure of a call from our friend, Dr. R. J. Patterson, of Bellevue Place, a hospital for the insane of the private class, at Batavia. His institution is always well filled with patients. It has the entire confidence of those who know anything about its admirable management. It has been in successful operation since 1867.

DR. J. SUYDAM KNOX has returned from a month's vacation, in excellent health.

DR. SIMEON STRAUSSER, of Chicago, is travelling in California.

DR. JOSEPH P. ROSS, of Chicago, is at Cape May.